Археолошки институт Београд *Књига LXXII/2022.*

СТАРИНАР



На корицама: Статуа царске жене из Ниша
фото: З. Радосављевић – Кики

Sur la couverture: Statue impériale féminine de Niš
Photo: Z. Radosavljević – Kiki



АРХЕОЛОШКИ ИНСТИТУТ БЕОГРАД

INSTITUT ARCHÉOLOGIQUE BELGRADE

UDK 902/904 (050)
ISSN 0350-0241 (Штампано изд.)
ISSN 2406-0739 (Online)

INSTITUT ARCHÉOLOGIQUE BELGRADE

STARINAR

Nouvelle série volume LXXII/2022

BELGRADE 2022

АРХЕОЛОШКИ ИНСТИТУТ БЕОГРАД

СТАРИНАР

Нова серија књига LXXII/2022

БЕОГРАД 2022

СТАРИНАР
Нова серија књига LXXII/2022

ИЗДАВАЧ
АРХЕОЛОШКИ ИНСТИТУТ
Кнеза Михаила 35/IV, 11000 Београд, Србија
e-mail: institut@ai.ac.rs
Тел. 381 11 2637191

СЕКРЕТАР РЕДАКЦИЈЕ
Јелена АНЂЕЛКОВИЋ ГРАШАР, Археолошки институт, Београд

ЛЕКТОР ЗА СРПСКИ ЈЕЗИК
Александра ШУЛОВИЋ

ЛЕКТОР ЗА ЕНГЛЕСКИ ЈЕЗИК
Дејв КАЛКАТ

ГРАФИЧКА ОБРАДА
Данијела ПАРАЦКИ и D_SIGN, Београд

ШТАМПА
БИРОГРАФ, Београд

ТИРАЖ
400 примерака

СЕКУНДАРНА ПУБЛИКАЦИЈА
COBISS

Учесталост излажења једна свеска годишње.

STARINAR
Nouvelle série volume LXXII/2022

EDITEUR
INSTITUT ARCHÉOLOGIQUE
Kneza Mihaila 35/IV, 11000 Belgrade, Serbie
e-mail: institut@ai.ac.rs
Tél. 381 11 2637191

SECRÉTAIRE DE RÉDACTION
Jelena ANĐELKOVIĆ GRAŠAR, Institut archéologique, Belgrade

LE LECTEUR POUR LA LANGUE SERBE
Aleksandra ŠULOVIĆ

LECTEUR POUR LA LANGUE ANGLAIS
Dave CALCUTT

RÉALISATION GRAPHIQUE
Danijela PARACKI & D_SIGN, Belgrade

IMPRIMEUR
BIROGRAF, Belgrade

TIRAGE
400 exemplaires

PUBLICATION SECONDAIRE
COBISS

The Journal is issued once a year.

Часопис је објављен уз финансијску помоћ
Министарства просвете, науке и технолошког развоја Републике Србије

Ce périodique est publié avec le soutien du
Ministère de l'éducation, de la science et du développement technologique de la République Serbie

САДРЖАЈ – SOMMAIRE

РАСПРАВЕ – ETUDES

ПРИЛОЗИ – APERÇUS

UDC: 903.36"636"(497.11)
902.2(497.11)"2017/2022"

https://doi.org/10.2298/STA2272009J
Original research article

MILOŠ JEVTIĆ, Faculty of Philosophy, University of Belgrade
MOMIR CEROVIĆ, National Museum Šabac

CIRCULAR ENCLOSURE FROM THE EARLY COPPER AGE IN NORTH-WESTERN SERBIA
Site of *Šančina* in Desić, near Šabac (excavations 2017–2019)

e-mail: milossjevtic6@gmail.com

Abstract. – In the wooded landscapes on the last northern slopes of the mountain Cer, a very well-preserved palisade ditch enclosure of small dimensions and a regular circular shape was discovered (site of *Šančina*, Desić village). Over the last few years, archaeological excavations at this site have focused on the inner space, bordered by a massive ring-shaped earthen rampart. An unusually wide and deep ditch surrounds a high earthen embankment of flattened conical shape, bordered on the inside by a palisade ditch, with traces of densely packed and deeply buried wooden posts. The excavations so far have not revealed any interruption in the circular palisade ditch, which could confirm the existence of an entrance, i.e., a passage, clearly bordered by an earthen rampart. In the central part of the circular fortification a deep shaft/well was discovered, which has been explored to the level of underground water. Apart from traces of smaller hearths on the inside of the palisade ditch and several deeply buried conical pits, with traces of charred, vertically placed posts, there are no other architectural remains inside the circular fortification. Traces of a catastrophic fire have been discovered inside the entire fortification and are especially visible above the palisade ditch. According to numerous sherds of secondarily burned ceramic vessels, the circular enclosure in Desić belongs to the post-Vinča culture of the Early Copper Age. According to the shape and basic elements of architecture, we assume that the earthen fortification in Desić belongs to a special form of smaller prehistoric enclosures**,** characteristic of circular palisade fortifications in the area of the Upper Tisza region, in the north-eastern parts of the Great Hungarian Plain.

Key words. – circular enclosures, Late Neolithic, Early Copper Age, Vinča culture, Lengyel culture, Ludanice group, mountain Cer, earthen rampart, palisade, ditch, deep shaft/well

In this paper we will try to find out what the outcomes of new archaeological research of prehistoric sites in Pocerina (site of *Šančina* in Desić, near Šabac) have been. The site of Šančine is extremely well preserved, which is primarily thanks to the natural wooded landscape in which it is located. The most distinctive part of this site is a massive earthen rampart built along the perimeter of a small conical hill surrounded by an unusually wide moat. Besides the inner rampart of a regular circular base and a deep funnel-shaped ditch, the system of this earthen fortification also includes an outer rampart of a horseshoe-shaped base. We assume that we already have enough elements to confirm that we are on the trail of discovering one of the rare, archeologically researched Late Neolithic – Early Eneolithic type palisade ditch enclosures south of the Sava and Danube.

Site description and research history

The archaeological site called "Šančina" is situated in the wooded part of the site of *Parlozi* in the territory of the village of Desić, near the confluence of the Parlozi brook into the small Vrbovica river, which forms the natural border between the villages of Radovašnica and Desić (geographical coordinates of the site: 44º 37′ 34.49″– 19º 30′ 28.65″). The prehistoric site of Šančina is located on the last, north-eastern slopes of the mountain Cer (the highest peak 687 m/nm), only a hundred

Manuscript received 17th February 2022, accepted 27th October 2022

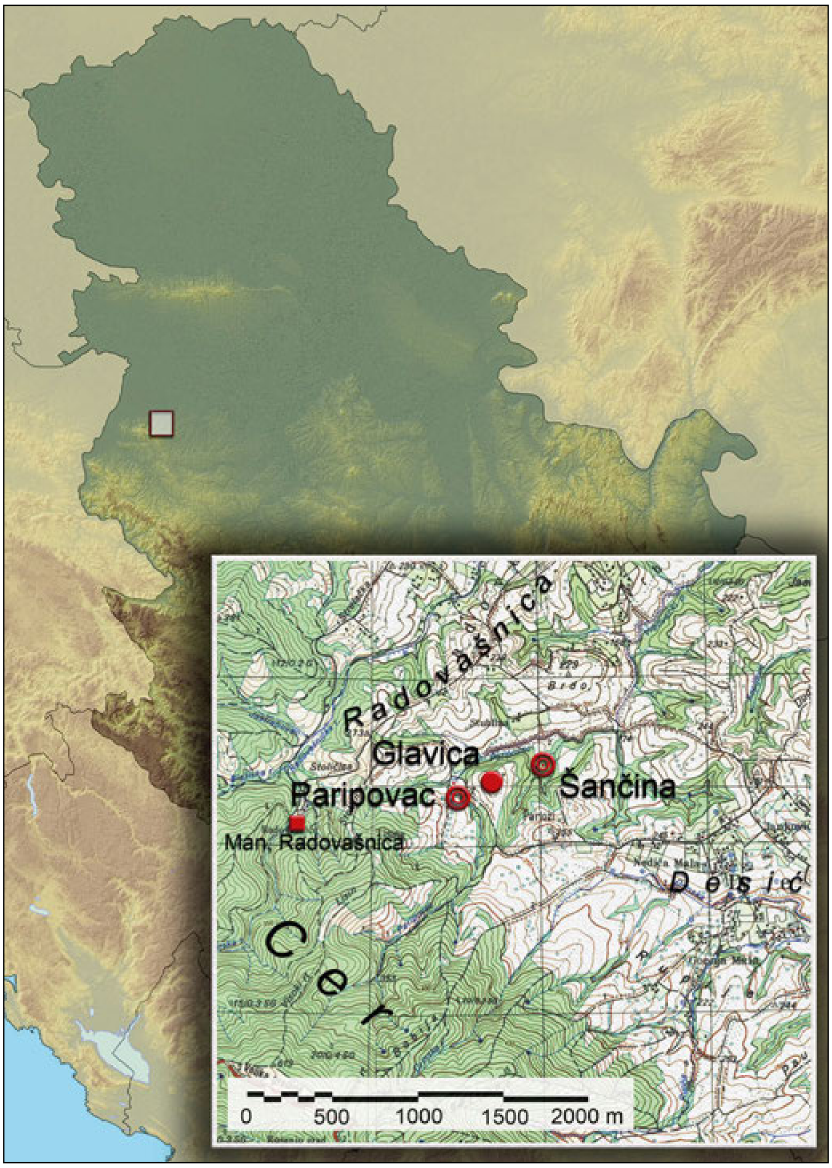


Fig. 1. Position of the prehistoric settlement of Parlozi (Glavica) and the sites of Šančina and Paripovac

*Сл. 1. Положај праисторијског насеља Парлози (Главица) и локалитета Шанчина и Парипова*ц

metres from the foot of the mountain and near the flat part of Pocerina. The site is located on private property (parcel cat. numbers 710, 710/1, and 702/1), occupied by a mixed deciduous forest (beech, hornbeam, acacia and oak), which makes field research difficult. In the geodetic books of the municipality of Šabac, the parcels on which the sites of Parlozi and Šančina are located are kept under the toponym *Lisina*, which is the name of a wide slope between the Lisina and Parlozi brooks, on the northern slopes of the mountain Cer, east of the Radovašnica monastery, situated in the territory of the eponymous village. In 1967, associates of the National Museum in Šabac and the Archaeological Institute in Belgrade, within the systematic field survey of prehistoric sites in the area of Mačva and Pocerina, organised the first archaeological excavations in the territory of the village of Desić near Šabac, including the site of *Šančina*. The organisers of the first field surveys and smaller trench excavations in this area were particularly impressed by the very well preserved circular earthen rampart at the site of "Šančina" and stated that "This settlement on the northern branch of the mountain Cer is a real masterpiece of hillfort fortifications of that time".[1] The authors correctly connected this small earthen fortification from the site of *Šančina* with the neighbouring prehistoric hillfort type settlement also located in the wooded part of the site of *Par-*

[1] Vasiljević, Trbuhović, 1970, 47.

lozi, after which the archaeological site was named. The same paper provides a sketch showing the position of the central prehistoric settlement (*Parlozi*), which stands on a flat hill above the site of *Šančina***.** Not far from the site of *Parlozi*, between the slope of the hill (*Lisina*) and the Lisina brook, another circular enclosure, called *Paripovac,* was discovered. According to the recent research, this circular enclosure is oval shaped (21 m in the north-south and 25 m in the east-west direction). It is located in dense, mostly low, vegetation, which belongs to the forest complex above the monastery in the village of Radovašnica. The similarity of its structure with the neighbouring finding at the site of *Šančina* is obvious, except that the earthen rampart is somewhat lower and flatter, with a wide, shallow ditch that is largely covered with scattered earth from the rampart. The existence of a ditch in the Paripovac circular enclosure is uncertain, as it has not yet been thoroughly investigated.

All three prehistoric sites (*Parlozi–Šančina–Paripovac*) are located along the slope of the hill Lisina, which stretches from the southwest (above the Radovašnica monastery) to the last slopes of Cer in the northeast (somewhere on the border of the territory of the villages of Radovašnica and Desić). The prehistoric settlement of Parlozi (Glavica) (geographical coordinates N 44 37 31; E 19 30 33, with an elevation of 252 m/AMSL is located between the circular earthen fortifications of Šančina (elevations in the range of 190–198 m) and the site of Paripovac (geographical coordinates N 44, 37, 23; E 19, 30, 28, elevation 228 m/ AMSL), at approximately the same distance of about 300 m. (Fig. 1)

Small size archaeological trench excavations, organised by the National Museum in Šabac and the Archaeological Institute in Belgrade, were simultaneously conducted at the sites of *Parlozi* and *Šančina* in Desić in 1967. The picture of the prehistoric settlement standing on the spacious flattened top of the hill (site *Parlozi* in Desić), provided by a deficient published report, is somewhat vague.[2] Subsequent visits to this site could not confirm the existence of the remains of a fortification surrounding the remains of the prehistoric settlement at Parlozi. The flattened, i.e., slightly rounded, central part of the site of Parlozi (the so-called *Glavica*) is now covered with low vegetation and only a small part is covered with arable land (there used to be vineyards, which were cut down a long time ago). The data indicating that the remains of a ditch and an earthen rampart were noticed somewhere at the foot of *Glavica* (parts of a dry stone structure are also mentioned), including the assumed existence of a wooden palisade, more likely refers to the expected picture of a fortified settlement from some later prehistoric cultures. The findings of *Parlozi* are contained in the field documentation kept in the National Museum in Šabac. Within four trenches, placed on cleared land (fields and tilled parts of the former vineyards), a relatively thin cultural layer was researched indicating a horizontal organisation of a prehistoric settlement, which was most likely an open type settlement. According to the current situation on the ground, the prehistoric settlement on "Glavica" certainly does not belong to the classic type of prehistoric hillforts, i.e., specially defended highland settlements. If the settlement was enclosed, we assume that its peripheral parts most probably ended with a simple wooden fence. In the researched parts of the trenches from 1967 modest remains of architecture were discovered (postholes, small lumps of charcoal, pieces of house daub), while mobile finds consist of small pottery sherds, a conical weight made of baked earth and several small flint blades. The pottery is quite uniform and testifies to a single-layer settlement.[3] The researched part of the settlement allows a typological reconstruction of conical cups with inverted rims and horn-shaped handles (placed just below the upper edge of the rim), fragments of larger vessels (pots) of finer manufacture, with short, cylindrical handles on the belly and then smaller vessels with knobbed decorations and smaller cups with handles not exceeding the height of the rim. The pottery is undecorated, of mostly fine manufacture and less polished surfaces. The vessels are rarely decorated with simple plastic applications or finely modelled plastic ribs. The most indicative find is a large part of a pedestal bowl with a hollow foot, i.e., the part of the vessel that connects the bottom of the recipient in the form of an open, semi-spherical bowl (with horn-shaped handles applied along the rim) and the upper part of the (high) foot of the bowl. According to the collected pottery from certain trenches that were explored in 1967, it can be confidently assumed that the settlements on the site of Parlozi belong to the post Vinča period of the Early Eneolithic.

---

[2] Vasiljević 1967.

[3] Comp. Stojić, Cerović, 2011, 78, T. XLI/5–2.





Fig. 2. Site of Desić–Šančina – view from the north
Fig. 3. Northern part of Šančina with the ditch and double rampart

Сл. 2. Локалитет Десић–Шанчина – поглед са севера
Сл. 3. Северни део Шанчина са ровом и двоструким бедемом

According to the field documentation from 1967, the circular earthen fortification on the site of Šančina was much more modestly explored compared to the other post-Neolithic settlements in the north-western part of Serbia. A smaller trench (2 x 4 m) was placed next to the northern, inner side of the earthen rampart, in an east-west direction, with a larger deviation of the eastern part towards the north. The trench was explored to a relative depth of about 1.00 m. The works were apparently interrupted due to the lack of portable archaeological finds, although traces of a burnt wooden structure were discovered next to the earthen rampart, in the lower parts of the excavation. The field diary mentions larger pieces of baked daub with imprints of wattle, thin logs and chopped beams.

ARCHAEOLOGICAL MATERIAL

New research at the site of Šančina – results of the archaeological excavations in 2017–2019.

In 2017, the National Museum in Šabac launched a very ambitious, long-term project of archaeological research on all three prehistoric sites in Desić near Šabac (Parlozi, Šančina and Paripovac).[4] Due to the unfavourable configuration of the terrain and mostly dense, forest vegetation at all three sites, the archaeological works were focused on the best preserved site of Šančina. In the preparatory phase of the research, the central part of the prehistoric settlement of *Parlozi* was partially examined, by opening several archaeological-geological probes. By using a hand drill in the central part of the site, the one which is not under dense, forest vegetation, a thinner cultural layer was confirmed in Parlozi (site of Glavica), with subsoil at a depth of 0.80–1.00 m. Smaller scale drilling with a hand drill was also performed at the Paripovac site, to a depth of about 1.20 m. Several geological trenches have been set up at this site within a wide stretched earthen rampart with a circular base, between the trees of a young, deciduous forest. On that occasion, the remains of the archaeological, cultural layer were not confirmed. Bearing in mind the rather vague picture of the size and limits of the prehistoric settlement at the site of Glavica (Parlozi), as well as the difficult access to the site of Paripovac, which has shown no traces of mobile archaeological finds so far, it was decided to focus the archaeological works of the first phase of research on the most easily accessible and the best preserved site of Šančina.

[4] The project called *Archaeological Research of the Sites: Parlozi, Šančina, Paripovac in Desić near Šabac* was approved and mostly financed by the Ministry of Culture of the Republic of Serbia (the project number is 631-02-61 / 2017-02). It is partly financially supported by the Department of Culture of the Municipality of Šabac.

Most of the data was collected by setting up 25 archeo-geological probes at the site of *Šančina*, predominantly in the area of the circular earthen fortification and its immediate surroundings. It was planned for this research to be published later, together with the geophysical research. Geological soil samples, obtained at the beginning of the archaeological excavations of the prehistoric site of Šančina, were valuable for determining the zones in which the archaeological cultural layer and its preservation were confirmed. A large earthen fortification situated on a small, conical hill and surrounded by an unusually wide and deep ditch clearly stands out in a forest landscape with mixed deciduous trees, dense shrubs and smaller watercourses in its immediate vicinity. After removing the low vegetation, the central part of the Šančina site had the appearance of a regular conical elevation with a pronounced, funnel-shaped depression in the inner part of the earthen fortification. The best view of the site is from the northern, cleared part of the terrain, since the owners of this part of the forest have cut down several trees (Fig. 2). Namely, this part of the terrain contains the remains of low forest vegetation, along with several massive tree stumps, which remained visible just above the ground. This allowed a clear view of the position of the unusually wide ditch between the two circular earthen ramparts in this part of the site (Fig. 3). The original plan of the trench excavations underwent major changes at the very beginning of the archaeological works at Šančine. The disposition of the archaeological trenches had to be adjusted to the requirements of the forest owner who asked for all the trees that were not intended for removal to be preserved at this stage of the work. Several large, tall oak and hornbeam trees located on the upper surface of the earthen rampart made the works particularly difficult.

Fig. 4. Aerial photograph of the site of Šančina from NE, taken in December 2017

Сл. 4. Аерофото лок. Шанчина са СИ, снимак дец. 2017.





Fig. 5. Desić–Šančina: 3D DMT terrain model with a view from the northwest

Сл. 5. Десић–Шанчина: 3Д ДМТ модел терена са погледом са северозапада



Fig. 6. Šančina from the southwest, the bottom of the trench under water in the spring of 2018

Сл. 6. Десић–Шанчина са југозапада, у пролеће 2018. године, ров под водом

In the initial phase of the research of the Šančina site, geodetic surveys were performed from the ground, and on several occasions during 2017–2018, a drone was used to survey and to georeference the terrain from the air. The most useful aerial photographs of the terrain under the deciduous forest were taken in the first year of research, during late autumn and the first days of winter (Fig. 4). These aerial photographs show the basic elements of the prehistoric earthen structure at Šančine, such as a circular earthen rampart, a wide funnel-shaped ditch (moat), which encloses the central inner rampart from all sides, and the horseshoe-shaped outer rampart. A large number of georeferenced points obtained from the aerial survey enabled the creation of a 3D digital model of the terrain. The layout and size of the prehistoric site of Šančina can be seen much better on a three-dimensional digital model, without forest vegetation (Fig. 5). The whole terrain is dominated by a regular conical elevation, on the edge of which an unusually large rampart was erected, with a regular circular base, apparently mostly made of earth from the deep ditch that surrounds it. Large earthworks created by the excavation of a wide ditch most likely provided the material for the construction of a somewhat lower, outer rampart in the shape of a horseshoe. An interesting photograph of the moat under water on the south-western side of site, taken in the spring of 2018, suggests that a deep ditch was dug between the outer and inner earthen enclosure and that it could have been filled with water during the use of the structure (Fig. 6). The measuring of the central part of the site, which is bordered by a closed ring-shaped inner rampart, indicates an almost ideal circular space, with a diameter of 25 meters, measured from the middle of the upper surface of the rampart along the north-south and east-west axes. The large earthen rampart is wide

stretched, with a slightly rounded and, in some places, flattened upper part. The width of the circular rampart on the upper level is about 3.50 m, with a funnel-shaped profile towards the interior of the circular space and a long slope (up to 10 m) towards the bottom of the moat. The configuration of the terrain in the immediate vicinity of the circular surface protected by the earthen rampart can best be perceived on the basis of the geodetic surveys, including a layout with isohypses and several profiles (sections) in the north-south and east-west directions. The longitudinal profile with a cross-section of the terrain through the central part of the site in the north-south direction (profile number 2), over 100 m long, is especially instructive (Fig. 7 C). This longitudinal profile indicates a relatively slight decline of the terrain from north to south, which follows the direction of one of the last narrow extensions ("lingula") of the north-eastern part of the mountain Cer. Towards the longitudinal profile, in the central part of Šančina, there is a visible section through the earthen rampart on the northern and southern sides, with a shallow funnel-shaped hollow in the middle. The rampart descends abruptly on both sides towards a deep ditch that encloses a conical elevation (about 4.50 m deep on the south and about 6.00 m on the northern side, measured from the upper surface of the rampart). The width of the ditch is difficult to determine since it is flanked in the north by a lower, outer earthen rampart (about 4.00 m high) and in the south it ends with a steeper slope of the hill. The ditch or moat is unusually wide, reaching a width of 15–20 m at the upper surface elevations between the ramparts, while it is flattened and 4–5 m wide at the bottom. The width of the ditch on the western side is unclear, since the bed of the Parlozi brook together with a narrow forest path runs between the conical elevation enclosed by a circular rampart and the adjacent slope of the hill. The average width of the moat at the base of the conical elevation in the west is over 6 m. The outer rampart has the shape of a horseshoe and it is the best preserved on the eastern and northern sides, with an open wide access on the south-western side of the site, through which flows the Parlozi brook. The western side of the moat is closed by a steep slope of the neighbouring "lingula", which starts just below "Glavica" (site of Parlozi). Older trench excavations of the prehistoric settlement on Parlozi, as mentioned earlier, provided a modest selection of portable archaeological finds, but with enough elements to indicate a connection with the site of Šančine. Interestingly, the flattened part of the horseshoe rampart on the eastern side is also used as part of one of the many forest roads. The section through the part of the outer rampart in the east-west and north-south direction indicates that the "earthen circular fortification" of smaller dimensions was primarily "defended" by a wide ditch and less by the open rampart with a base in the shape of a horseshoe. The current horseshoe-shaped outer rampart has the following dimensions: north-south about 85 m, east-west about 75 m. It seems that the wide open "passage" through the outer rampart on the north-western side of Šančine is of natural origin and that it was not created by the passage of a small stream or the subsequent dismantling of the rampart for the local forest road. According to the configuration of the terrain, there is an impression that the conical elevation with a circular rampart of modest dimensions was shaped by intersecting an elongated ending of the hill slope on the southern side. The wide ditch on Šančine was most likely formed by the deepening of smaller forest watercourses at the foot of the *lingula*, on the eastern, western and northern sides. It is probably no coincidence that the ditch on the southern side is somewhat shallower, and that only the south-western side of the site clearly shows a wider earthen embankment of a saddle shape, raised by backfilling the ditch to a height of about 2.50 m. Since the remains of a prehistoric settlement at the site of Glavica are located in the same direction (at a distance of about 300 m), it is logical to assume that the "earth bridge" (*Erdbrücken*) over the ditch (most likely filled with water) was much higher and was used as one of the access paths to the conical hill with a circular rampart. It is unlikely that the semi-spherical earthen embankment over the southern part of the ditch was created later for the needs of crossings between forest roads on the western and eastern sides of the site, bearing in mind that the lowest parts of the ditch outside this embankment are still "wet" due to the presence of the underground waters.

The archaeological site of Šančina in Desić looks very similar (circular base of the earthen fortification, double earthen rampart, wide ditch between the ramparts) to the group of prehistoric circular enclosures (so-called *Kreisgrabenanlagen* or neolithic *rondels*) in Central Europe. At the beginning of the research, we were aware that the appearance of the site alone could not be a reliable indicator of the type of this prehistoric site. During the first year of research, we classified the Šančina site in Desić in the group of prehistoric rondels, primarily for the purpose of facilitating the

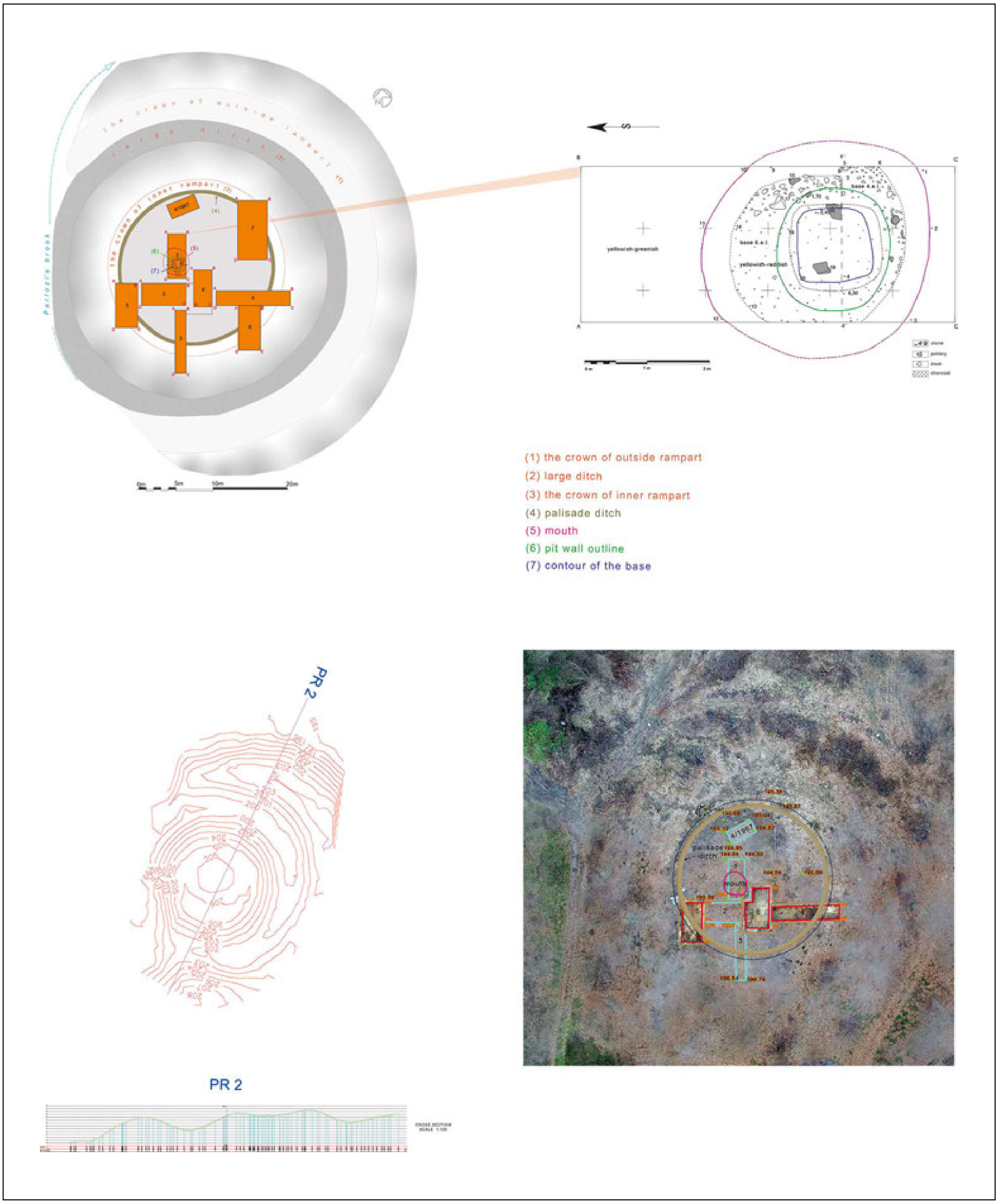


Fig. 7. A – Sketch of the circular enclosure of Desić–Šančina, with trenches, palisade ditch and rampart;
B – Trench 1 and upper levels of deep shaft/well; C – Isohypses of the terrain of the circular enclosure of Šančina;
D – Position of the palisade ditch, trenches 1–5, trench 4/1967 and deep shaft/well on aerial photograph

Сл. 7. Десић–Шанчина: А – скица кружноī објекīа са расīоредом сонди, ūалисадноī рова.и бедема;
B – Сонда 1 и īорњи слојеви дубоке јаме/бунара; C – изохиūсе шерена кружноī објекīа Шанчина;
D – Положај ūалисадноī рова, сонди 1–5 дубоке јаме/бунара

description of archaeological works. Later, we understood that the term (prehistoric) *circular enclosures* is more appropriate for the earthen structure from Desić. As for the methodology of archaeological excavations, it seemed to us that the extremely well-preserved central circular space, smaller in size and clearly surrounded by a high earthen rampart, could be very well explored by segments, similar to prehistoric tumuli (profiles placed to form a cross between four segments of the circle). One should bear in mind that the appearance of the central part of the Šančina site, with a pronounced funnel-shaped hollow between the flattened highest parts of the rampart, somehow indicates reverse stratigraphy. Namely, the expected cultural layer is the thinnest in the centre of the circular enclosure and the most robust on the periphery, which is contrary to the numerous stone-earthen prehistoric tumuli recorded in western Serbia. The difference between the surface elevations on the crown of the earthen rampart and the lowest central parts of the circular enclosure is about 2.00 m. Unfortunately, since the works were conducted on a private forest property, the methodology of archaeological excavations had to be adjusted in order to preserve certain larger trees on the site, as per the owner's request.

In the first three years of research (2017–2019), a total of 8 trenches of different sizes were explored, with a total area of 152 m². Archaeological contexts within individual trenches were isolated inside a square grid with chessboard fields, measuring 1.00 x 1.00 m. The trenches were placed mostly inside the area bordered by a circular, earthen rampart and are all oriented in a north-south or east-west direction (Figs. 7A, 7B). In this paper, we will focus only on the most significant archaeological situations, with a modest selection of portable archaeological finds, which contribute to a more reliable chronological and cultural determination of the site.

Trench 1 (2.5 x 6 m) is placed in the central part of the circular enclosure, in a north-south direction. The position of the trench is shifted by about 1.50 m towards the western part of the circular rampart, in relation to the central point of the circular enclosure, on a relatively flat part of the terrain (the elevation in the middle of the trench is lower by about 0.30 m compared to the corner points of the northern and southern profile). The stratigraphic image in the trench all the way to the subsoil (relative elevation of 0.80 m, measured in the central part) was very simple. The archaeological layer has not been recorded on the entire surface of the trench. Only sporadic traces of red baked earth were discovered near the southern profile, just above the subsoil. Smoothing of the base at this point uncovered a larger circular pit (diameter about 3.70 m), which partially entered into the longitudinal profiles. A cut of darker earth, with small lumps of daub, charred particles of wood and secondarily burned sherds of pottery, descended to a depth of about 3.00 m, in the shape of a funnel (Fig. 7D). The pit from the southern part of trench 1, after a funnel-shaped widening, becomes narrower and forms an irregular square shape, with rounded corners, measuring 1.30 x 1.40 m. The cut of the pit, approximately of the same shape and dimensions could be followed to a depth of 6.30 m, when water appeared at the bottom of the excavation. Considering the shape and depth of the pit in the central part of the circular enclosure, as well as the fact that the water appeared at an elevation corresponding to the underground water level at the foot of a conical hill with a circular earthen rampart at the top, it is obvious that we have discovered and explored one of the few prehistoric wells in our area.



Fig. 8. Desić–Šančina, trench 1, the appearance of the well during excavation

Сл. 8. Десић–Шанчина, сонда 1, изīлед бунара у ӣоку исӣраживања

Brief description of the contents of the well from trench 1 (central area of the circular enclosure)

According to the uniform content from the top to the bottom of the pit, it seems that the well was filled in a relatively short period of time. During the emptying of the well, no discontinuities i.e., layers of backfilling were noticed. The soil filling in the well is quite

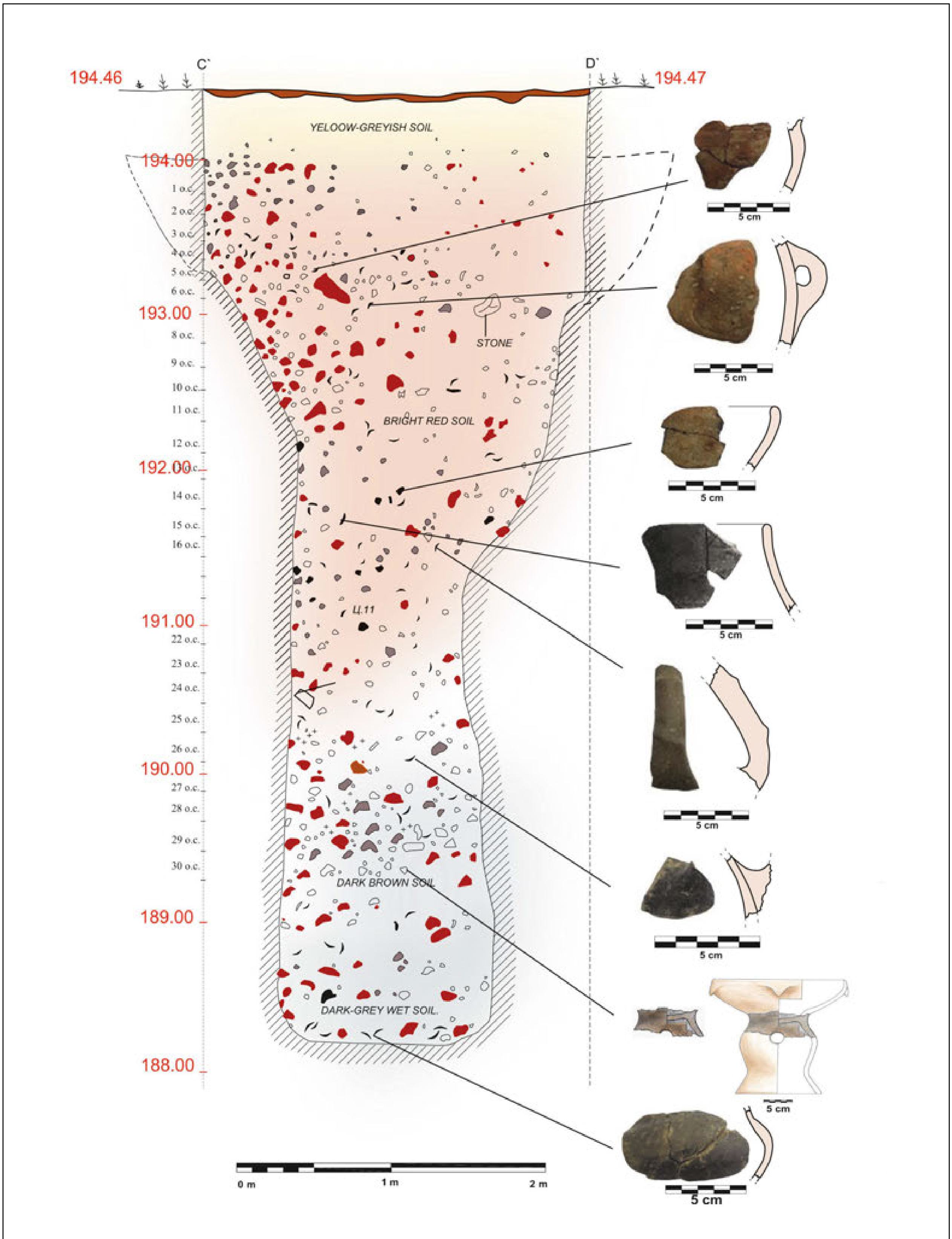


Fig. 9. Desić–Šančina, trench 1, cross-section of the well

Сл. 9. Десић–Шанчина, сонда 1, пресек бунара



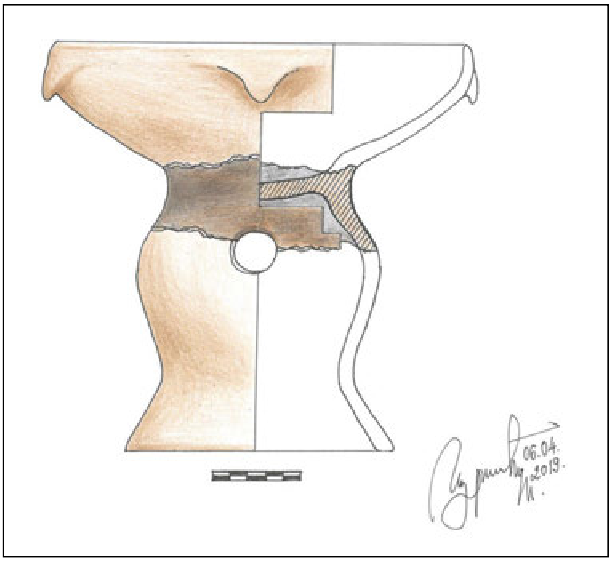


Fig. 10. Desić–Šančina, trench 1, the appearance of the layer at the bottom of the well
Fig. 11. Desić–Šančina, trench 1, reconstruction of the pedestal bowl from the bottom of the well

Сл 10. Десић–Шанчина, сонда 1, изглед слоја на дну бунара
Сл. 11. Шанчина, сонда 1 – реконструкција пехара на нози са дна бунара

homogeneous, with an unusually high concentration of crushed baked daub of reddish or dark brown colour, occasional traces of soot, smaller or larger pieces of charcoal and sporadic finds of pebbles or finely crushed stone. (Fig. 8) A higher concentration of crushed, red baked earth is particularly present along the walls of the well, which may indicate that the pit was backfilled immediately after a large fire (or series of fires) inside the circular enclosure. Dark grey wet soil at the bottom of the well contains a slightly higher concentration of soot, ash, pieces of red baked earth and larger pieces of charcoal (Fig. 9). It is necessary to emphasize that, due to the appearance of water, the bottom of the well remained unexplored. Archaeological material from all levels of the well filling consists almost entirely of smaller or larger sherds of ceramic vessels. (Fig. 10) Mostly smaller sherds of secondary burnt vessels of larger dimensions and of rather coarse manufacture with slightly polished undecorated surfaces were discovered. Due to the fragmentary nature of the ceramic finds, only certain elements of larger vessels can be typologically distinguished, such as pots with short, horizontally applied, flat handles on the rounded, central part of the belly. Finds of ceramic sherds that were not burnt are rare. These are mostly parts of smaller vessels, such as black polished cups or goblets with one handle, rounded bellies and conical necks. There is an interesting find consisting of a dark brown, polished handle of a larger cup or goblet, with an oval cross-section, decorated with finely shaped and slanted plastic ribs. A ceramic find from a relative depth of 5.10 m, which belongs to the large upper part of a hollow foot pedestal bowl is the most chronologically sensitive artefact. It seems that the preserved part of the foot with a beautifully shaped circular opening allowed a reliable reconstruction of the pedestal bowl (Fig. 11).

Some particularly valuable stratigraphic data from the well, which indicates its relatively rapid backfilling, refers to the fact that certain sherds of the same type of vessels can be found in the highest and lowest layers of the deep pit. Such is the case with parts of the reconstructed hollow pedestal bowl, decorated with circular openings, with a shallow calotte-shaped recipient and decorated with horn-like ornaments bent downwards, applied just below the rim. What is surprising is the complete lack of animal bones, as well as parts of tools made of polished stone or flint. No charred grains of cereals were noticed in the earth filling in the well, although some parts of the house daub contained visible remains of chaff. Based on the stratigraphy of the cultural layers in the well and the collected movable archaeological finds, we believe that the well stopped to functional after a terrible fire, which caught the interior of the enclosure.

Assuming that the bottom of the deep pit/well is just below the lowest explored cultural layer, it is obvious that there is too little space left for the intentional placing of some representative gifts at the bottom of the well (which was probably under water in its initial phase of use), as is the case in some early Eneolithic palisaded enclosures in the Carpathian Basin.

Trench 2 (6 x 3 m) is placed in the south-western segment of the enclosure, along the southern profile of trench 1, with the orientation of the longer side in an east-west direction. It is located on the slope of the terrain from south to north, i.e., with a slight slope between the earthen rampart and the flattened, central part of the enclosure. The elevation of the southern side of the trench is about 0.40 m higher than the elevation of the northern side. The stratigraphy in this trench is significantly different from the situation in trench 1. Beneath the forest humus there is a thinner layer (0.20–0.40 m) of pale brown earth, without archaeological finds. Almost on the entire surface of the trench a "ruin layer" appears with a large concentration of red baked earth, larger or smaller lumps of daub and finely crushed stone. Portable archaeological finds mostly consist of smaller or larger sherds of secondarily burned vessels of larger dimensions and rather coarse manufacture, without any visible decoration. The most distinguished one is the upper part of a large vessel with thick walls and a wide, slightly curved, horizontally flattened rim and a long cylindrical neck.

The cultural layer, which is dominated by crushed, red baked earth, follows the fall of the terrain and is thickest in the southern profile of the trench (up to a relative depth of 1.10 m), and thinnest in the northern profile. The stratigraphy in this trench clearly shows that the so-called ruin layer, i.e., the layer formed after a big fire, is connected with the space closer to the rampart and that it disappears ("declines") towards the central part of the enclosure, so that there are only traces of it in the neighbouring trench (trench 1). Larger pieces of daub of different baking intensity (colour varies from bright red to dark brown or black) have imprints of different types of wood, most often branches and thin logs, and sometimes there are imprints of posts and chopped timber planks. Special attention was paid to a group of several larger pieces of red baked earth of sandy fabric, with a flat, slightly smooth upper surface. All the pieces had imprints of thin wattle on the underside, over which 7–8 cm thick clay was applied, which is reminiscent of the construction of a hearth structure, possibly the dome of a kiln. Beneath the ruin layer, a thin, compact layer of pale, greyish-brown earth was found in some places. We assume that these are the remains of compacted earth used for the floor in one of the structures or a simple tread surface of the enclosure, since it lies on yellow-brown subsoil. During the smoothing of the base at the level of the tread surface, two smaller pits, located along the eastern and western profiles of the trench, at a distance of about 5 m from each other, were discovered and emptied. Both pits are similar; funnel-shaped, with a diameter of 0.60 and 0.70 m at the top of the pit and 0.20 m and 0.25 m at the bottom. According to the depth of the pits (0.95 m and 1.10 m) and the discovered stone slab at the bottom of one pit and lumps of charcoal at the bottom of the other one, we assume that they were primarily used as postholes for large and probably tall wooden posts.

Trench 3 (1.5 x 8 m) is perpendicular to trench 2 and lies among forest trees in the southern part of the enclosure. The trench is oriented in a north-south direction and its eastern, longitudinal profile is placed in the axis of the eastern profiles of the previously opened trenches. The southern profile of the trench is located at the foot of a rather steep slope of the earthen rampart on the inside, while the northern profile reaches the middle of the crown of the rampart. Similar to the situation in trench 2, this trench/ditch is dominated by the so-called ruin layer with its specific layer of red baked earth and pieces of daub that burned at different temperatures. Pieces of daub were found with visible imprints of branches, logs and, rarely, planks or large posts. Some pieces of daub contain imprints of logs with remains of bark. The selection of portable archaeological finds, with the exception of traces of wooden architecture, was very modest. Secondarily burned parts of larger, unornamented vessels of rather coarse manufacture were found in the layer of red baked earth, without any visible elements enabling their typological classification. A layer with traces of burning of varying intensity was present on the entire surface of the trench. The most intense traces of burning (burnt pieces of house daub and ceramics, compact earth of dark red to purple colour) were recorded closer to the upper level of the rampart, at a distance of about 5.00 m from the northern profile (Fig. 12). In the corner parts of the excavation on this part of the trench, the layer of red baked, loose earth reaches a height of 1.50–1.60 m, measured from the hard, burnt floor, i.e., from the tread surface. It seems to us that the research in the southern part of the trench provided enough data to determine the cause of the creation of a



Fig. 12. Desić–Šančina, trench 3, cross-section of the rampart along the palisade ditch

Сл. 12. Десић–Шанчина, сонда 3, пресек бедема уз палисадни ров

Fig. 13. Desić–Šančina, trench 3, palisade ditch and postholes

Сл. 13. Десич–Шанчина, сонда 3, палисадни ров и јаме за стубове



powerful, destructive, burning layer on the inner side of the earthen rampart. Yellowish-green subsoil was found after removing the layer of intensively burned, compact earth ("floor"), at a relative depth of 1.80 m (measured from the upper level of the rampart). After smoothing the base of the excavation at the level of the subsoil, a 0.40–0.45 m wide ditch was discovered immediately next to the embankment of the rampart with traces of burning. Up to a depth of 0.65 m the ditch was covered with red baked earth, finely crushed and larger pieces of burnt daub. By cleaning the lower level of the ditch, traces of six postholes were discovered, densely arranged next to each other (Fig. 13). The best preserved posthole, 0.27 m in diameter, was buried into the subsoil up to 0.50 m. All this indicates that inside the slightly curved "foundation ditch" in trench 3, wooden posts were densely dug in over one metre deep into the subsoil. Similar foundation ditches, known as "Fundamentgräbchen", are used for burying vertical posts in houses from the late Neolithic and early Eneolithic in the northern Balkans and the Carpathian Basin.

Traces of burnt posts that intersect the longitudinal profiles of the trench indicate that the inner palisade was high and that it was most likely at or above the crown of the circular earthen rampart. The existence of a wooden palisade on the inside of the rampart confirms its role as a kind of defensive wall and support for a high earthen embankment.

Trench 4 (2 x 10 m) is placed in the south-eastern segment of the enclosure, in a east-west direction. The newly opened trench, in the form of an extended ditch, is located in the same line as the trench 2, at a distance of 4 m, with a western profile at the foot of the southern part of the rampart and an eastern profile at the crown of the rampart. The stratigraphic image of the basic elements in the trench is similar to that of the trench 3. Immediately below the thinner layer of humus in the western part of the trench, a layer of reddish baked earth was noticed, mixed with crushed parts of house daub, while in the eastern part the earth is of a pale yellowish-brown colour with a dusty structure and belongs to the layers of the earthen rampart. The trench was explored up to the subsoil, with depths

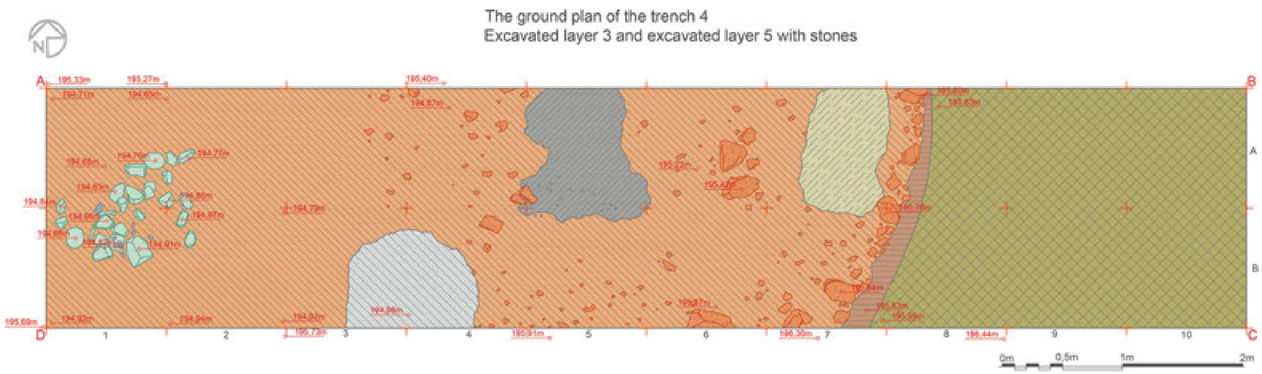




Fig. 14. Desić–Šančina, base of trench 4

Сл. 14. Шанчина, основа сонде 4

reaching 0.80–90.00 m in the western part and 1.90–2.00 in the eastern part. The layer of yellowish-brown earth belonging to the rampart was explored in the area along the eastern profile of the trench, to a length of about 2.50 m and to a depth of 0.50 m. The discovered part of the rampart is compact, without visible interlayers of earth and without archaeological content. An intense burning layer of dark red to purple earth, 0.20–0.30 m thick, was found right next to the rampart. Due to the strong fire, some pieces of daub were vitrified, i.e., they have a glassy, hollow structure of greenish tones, which clearly indicates the primary source of the fire. The rest of the trench is covered by a ruin layer, characterised by more and less burnt earth and crushed burnt daub, mostly of light red colour, with numerous larger pieces of baked daub, with imprints of branches, thin logs and half logs (Fig. 14). The ruin layer is the thickest next to the burning layer (over 1.50 m thick), i.e., next to the vertical profile of the inner side of the rampart, which was exposed to a strong fire. The burning layer along the rampart lies directly on the collapsed palisade ditch, about 0.60 m wide, which is buried in the subsoil to a depth of about 0.55 m. At the bottom of the ditch, six postholes were found, 0.25–0.30 m in diameter, densely arranged next to each other. The maximum depth to which the individual postholes were emptied was about 0.70 m, measured from the bottom of the palisade ditch. In the ruined, loose layer, which was formed directly next to the burnt inner palisade, larger, amorphous pieces of compact earth can be distinguished, as well as large, square pieces of earth of a sandy structure, stacked on a pile over one metre high. Due to the high concentration of coarse sand in the structure, these individual large lumps of earth were more resistant to fire and, therefore, have stronger traces of burning only on the outer surfaces. We assume that the mentioned large lumps of sand were stacked directly next to the wooden palisade and that they served as a kind of support on the inside of the ramparts.

Numerous pieces of baked daub of reddish-brown tones, from the *burnt layer* closer to the rampart have imprints of light wooden material (thin logs, branches) and more rarely prints of half logs, planks or larger posts). The most distinctive one is a large piece of daub of bright red colour (baked), with an irregular surface (22 x 14 x 5.5 cm) and with a smooth upper surface, which is decorated with thin incisions (Fig. 15). A part of the incised "chessboard" pattern has been preserved, with rectangular fields (a total of 15 fields) of approximately the same dimensions (1.5 x 2 cm; 2x 2 cm, 2 x 3 cm). The interesting details include two fingerprints in moist clay, clearly visible on the edge of the upper surface of the daub, near the preserved field with incised lines. Despite the structure, which is characteristic of house daub, the ornamented fragment does not have clear imprints of the wooden material on which it was applied. Therefore, it seems that the polished slab with an incised mesh pattern, of unequal thickness (4–5, 5 cm), is more likely part of a piece of furniture made of clay. The massive and rounded edge part of the slab is reminiscent of the peripheral part of a circular or oval "hearth construction" made of baked earth. In the western part of the trench, just above the

subsoil and a thin layer of reddish compact earth (part of the tread surface inside the enclosure), an irregular circular surface was discovered under large pebbles and smaller crushed stone. Apparently, these are the remains of a small hearth (about 1.00 m in diameter), which, after use, seems to have been covered first with a pile of stones, and then with a ruin layer containing a large amount of baked daub. The possibility that these are the remains of a hearth is supported by a number of elongated pebbles placed vertically along its edge, as well as a layer of grey, ashy earth under a pile of stones. In the group of vertically placed stones of medium size, there was also a smaller, square polisher made of fine-grained sandstone. In addition to smaller and larger pieces of burnt daub, several sherds of ceramic vessels were discovered in the ruin layer around and inside the hearth. Most of the ceramic fragments belong to secondary burnt vessels of larger dimensions, with unadorned outer surfaces. Parts of larger pots with elongated necks and short, vertical handles on the shoulder of the vessel can be typologically distinguished. Rare are the parts of smaller vessels, primarily cups (it is noticeable that bowls are missing) of thinner walls and polished exterior surfaces, and of dark grey colour. Especially valuable is the find of a fragmented cup with two handles, which could be completely reconstructed (Fig. 16). The cup is of smaller dimensions (height 13.8; rim diameter 9.7 cm, base diameter 9 cm), light, reddish-brown in colour, with polished, undecorated surfaces. It is characterised by large handles of oval cross-section, which start from the rounded belly and end at the level of a slightly everted rim.

The finds of a fragmented cup with two handles, and several sherds of smaller fine ware, do not appear to have been in contact with the large fire caused by the burning of the inner palisade. The ceramics with weak traces of secondary burning most likely do not belong to the destruction layer with a high concentration of baked daub and baked pottery of reddish-brown tones. We can assume that the cup with two handles reached the hearth zone before the great destruction, that is, the large fire that left a visible trace in the current stratigraphy of the enclosure. The stones thrown over the remains of the damaged cup with two handles indicate that the hearth was used for a short period of time, which is confirmed by the small amount of soot and ash in its base. Not far from the hearth covered with stones, parts of two conical pits buried in the subsoil were discovered, one intersected by the southern profile (diameter about 1.20 cm, diameter at the bottom about 0.30 m, with a depth of 0.95), and the other in the north-western corner of the trench (diameter about 0.50 m, bottom diameter about 0.25 m, depth 0.75 m).



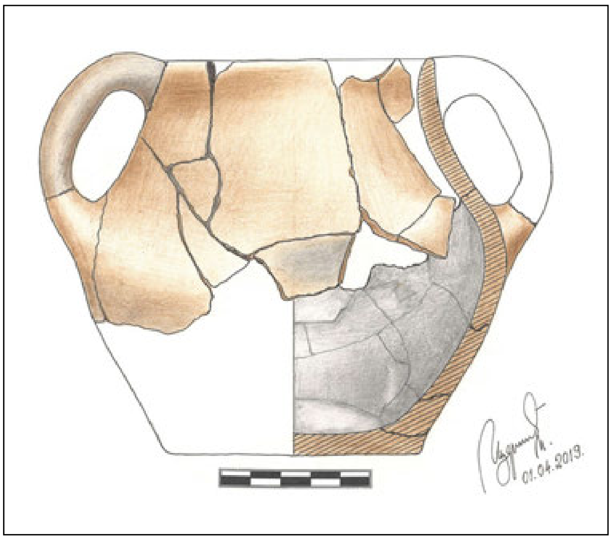


Fig. 15. Desić–Šančina, trench 4, incised mesh pattern on a part of daub from some (house) furniture
Fig. 16. Desić–Šančina, trench 4, goblet with two handles, find from the hearth area

Сл. 15. Десић–Шанчина, сонда 4, мрежасти урези на делу лепа
Сл. 16. Десић–Шанчина, сонда 4, пехар са две дршке из ватришта

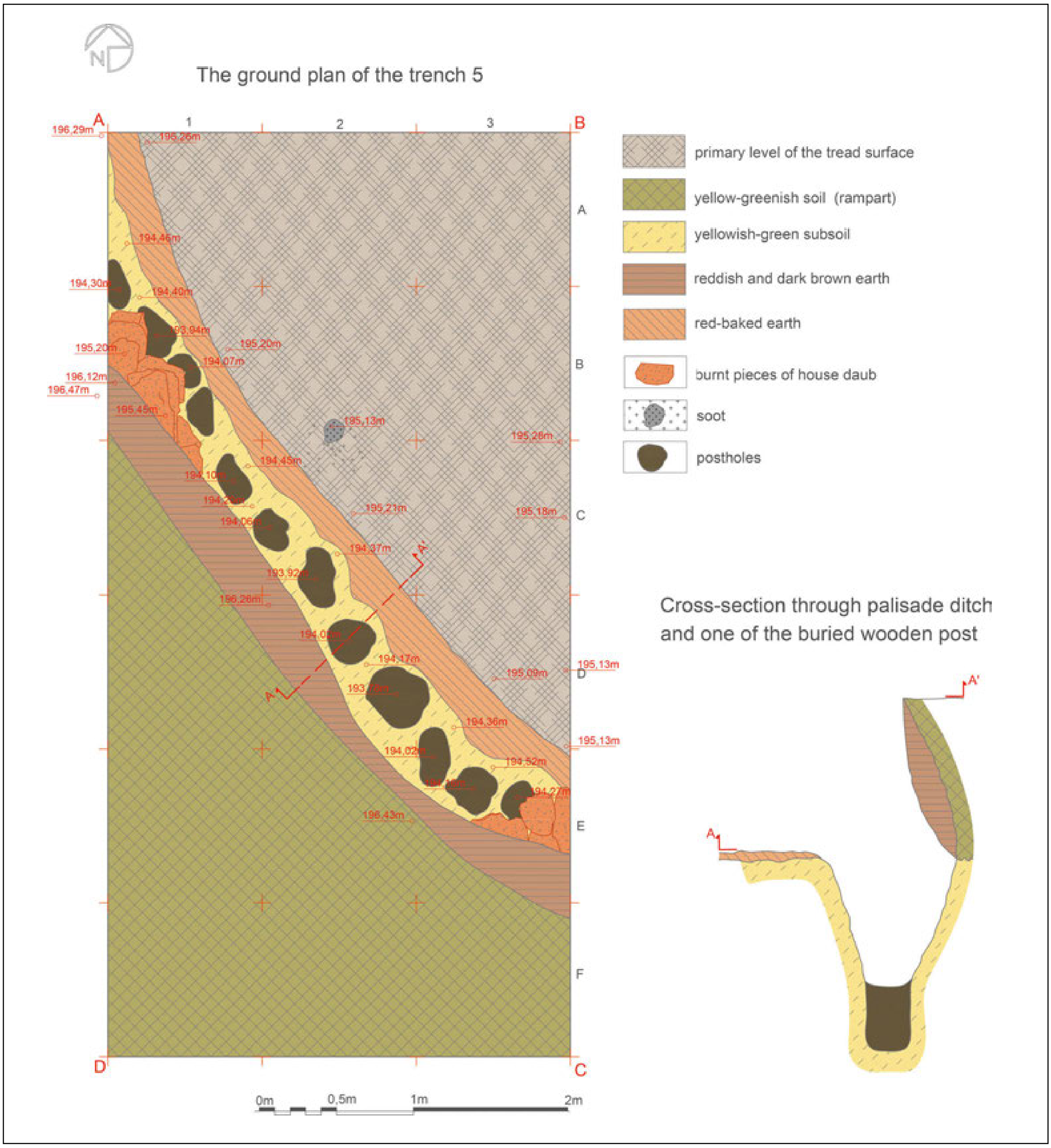


Fig. 17. Desić–Šančina, trench 5, base with palisade ditch

Сл. 17. Десић–Шанчина, сонда 5, основа са палисадним ровом

Both pits are filled with ash-grey earth, without archaeological material and with the remains of charcoal. They are very similar in shape and content to the postholes in trench 2. The appearance of the larger pit, which is intersected by the southern profile of the trench, clearly shows that a large wooden post used to be dug into the hole. Namely, the burning layer, visible in the profile of the trench, descends almost to the bottom of the posthole. Ceramic finds from the burnt layer in the trench mostly belong to unornamented pots of larger dimensions, with well-polished and undecorated surfaces. The main feature that could be noticed

consists of short, flat, or tunnel-shaped handles on the shoulder or long neck of the pot. Apart from pottery sherds, no other types of portable archaeological finds have been discovered. Only a burnt hollow bone of a feathered animal can be mentioned as an isolated find from the burnt layer.

Trench 5 (3 x 6 m) was placed in a north-south direction, next to trench 2 (a control profile 0.50 m wide was left between the trenches), so that the northern profiles of both trenches are in the same line. The location of the trench covers the crown of the rampart and the space directly below the flattened part of the earthen embankment, with the aim of discovering a palisade ditch in a larger space, diagonally. The excavation of the trench also included a slight depression on the upper level of the rampart, which indicated the possibility that one of the entrances of the enclosure was located on the south-western side. The stratigraphic image repeats the situation from trenches 3 and 4 in many elements. A part of the trench along the southern and western profiles was explored to a depth of about 0.50 m, measured from the upper surface of the rampart. The earthen embankment on the researched part of the rampart is compact, light yellow in colour, without archaeological content. Immediately below the crown of the rampart, there was a unique cultural layer, up to a relative depth of about 1.40 m, which is characterised by reddish earth, with a greater or smaller concentration of crushed and baked daub. It is a destruction layer similar to the one in the previous trenches that touch or partially cut the crown of the rampart. The most interesting part of the archaeological layer was located right next to the inner edge of the upper surface of the rampart, which belongs to the narrow burning zone (0.20–0.30 m), especially intense at the level of the tread surface, i.e., the elevation at which the palisade ditch was cut in. In the upper zones of the cut, the ditch was damaged due to the high pressure of the earthen embankment from the rampart, and is therefore, of unequal width (0.45–0.65 m). The ditch was cut into the subsoil to a depth of 0.75–0.80 m, and was almost completely covered with heavily burnt ruin material. Numerous pieces of house daub were found in the layer of red baked earth, some of which were vitrified due to a large fire and had the appearance of hollow pieces of slag. At the bottom of the palisade ditch, densely arranged postholes, 0.25–0.30 m in diameter, were discovered (Fig. 17). Some postholes were emptied to a depth of about 0.50–0.60 m. The archaeological layer in the entire trench is very poor in portable finds. An unusually small number of sherds of secondary burnt pottery was discovered. Atypical parts of unadorned larger vessels, with thicker walls and polished, unadorned exterior surfaces of bright red, were found directly next to the rampart. The main task was fulfilled by the opening of this trench, which diagonally encompassed an arched palisade ditch over 5 m long, with a deep ditch and 12 larger postholes.

This made it possible to connect the researched parts of the palisade ditch within the three trenches that partially intersect the upper, flattened surface of the rampart (trench 3–5) and to quite reliably reconstruct the diameter of the inner palisade of the enclosure, measuring about 21.5 m. However, the uninterrupted continuity of the densely arranged postholes in trench 5 excluded the possibility that the expected entrance of the enclosure was located on this part of the rampart.

Trench 6 (2.5 x 5 m) is located in the central and relatively flat part of the enclosure, between trench 2 and trench 4, oriented by longer sides in a north-south direction. The northern profile of the trench is in the vicinity of the enclosure's central point, and the southern side of the trench is at the foot of the slope of the rampart, in line with the southern profiles of the trench that flank it on the eastern and western sides. The stratigraphic image in the trench is quite simple, since subsoil is found in the northern part at a relative depth of about 0.50 m, and in the southern part at a depth of about 0.80 m. There is practically a unique cultural layer, which starts beneath forest humus and a thicker layer of light yellowish-brown and dusty soil (most probably a deposit from the rampart) and ends with subsoil of a yellow-green colour. In the northern part of the trench, closer to the enclosure's centre, there is almost no archaeological material. In the inter layers of red baked earth, smaller sherds of secondarily burnt pottery and tiny pieces of baked, most often crushed, daub were sporadically found. The southern part of the trench, especially along the profile closest to the rampart, provided incomparably more archaeological data. Numerous sherds of secondarily burnt pottery, often stacked on top of each other, were found immersed in a thicker layer of red baked earth, along with charred pieces of daub and a few crushed stones. An interesting find belongs to the stone industry, i.e., a smaller part of well-polished stone ball. The concentration of portable archaeological finds was highest in the south-western corner of the trench, and that was the reason for opening two smaller extensions, one of

3.75 m² on the southern profile and the other of 3.00 m² in part of the western profile. The ruin layer with traces of strong burning covered both extensions almost in their entirety. In the layer of charred, dark-red earth, there were sherds of secondarily burned larger vessels and a greater quantity of charred daub with imprints of branches (2–4 cm) and logs, with a diameter of up to 15 cm. A larger zone of baked earth was discovered at the base of the ruin layer, with traces of soot and ashes, which may indicate the existence of a hearth. In the immediate vicinity of the "hearth", beneath the ruin layer, a conical pit (0.80 x 0.90 m) was discovered, dug into the subsoil at 0.70 m. The pit was very sparce with archaeological content, with rare findings of baked daub and smaller sherds of pottery. Similar to most conical pits discovered so far, we may assume that this pit was also used for placing a large wooden post. This assumption is supported by the find of a large stone (which could have been used for propping up the post) found against the pit wall, above the narrowed bottom of the pit, with a diameter of about 0.30 m.

An untypically large quantity of pottery sherds belongs almost entirely to secondarily burnt large vessels. Before detailed processing of the entire pottery material excavated in the inner part of the enclosure, it is possible to partially reconstruct some vessels of thicker walls and well-polished external surfaces, discovered in the southern part of the enclosure. These are tall, undecorated pots/pithoi (height over 0.60 m) with an unprofiled rim, cylindrical or conical neck, rounded body and flat base. It appears that the pots had, most often, two short vertical handles, modelled at the transition of the neck to the vessel's shoulder. The most distinctive pieces are parts of a large pot with a flattened, unprofiled rim and long cylindrical neck, rounded body and wide flat bottom. The main features of this type of pot are two short, thick flat handles, vertically modelled just below the rim.

Trench 7 (4 x 8 m) was opened in the north-eastern part of the enclosure, with the orientation of the longer sides in a north-south direction. The size and position of the trench, as well as in previously opened areas, was conditioned by the free space between the trees. We opted for a somewhat wider excavation to better examine the architectural structures related to the construction of the rampart, by placing a palisade ditch and inner palisades. The trench mostly covered the inner slope of the earthen fortification and, in a smaller part, the upper area (crown) of the rampart, with the highest elevation in the north-eastern corner and with the east side considerably higher than the one closer to the west. Therefore, the excavation was of uneven thickness up to the subsoil, measured against the northern profile, from 1.30 m to 1.85 m, and against the southern profile from 0.75 to 1.25 m. After removing humus and the layer of light brown earth (0.30–0.40 m), a slightly curved line (sinusoid) was clearly outlined, sharply separating the earthen rampart from the reddish coloured cultural layer. The cultural layer is characterised by baked earth with the highest concentration of baked daub in the narrow belt along the earthen embankment of the rampart, from where it significantly falls towards the western profile of the trench. After removing the ruin layer in the part of the trench beneath the ramparts, a hard compacted tread surface was found, of reddish and dark grey tones. After cutting into a part of the earthen rampart that overlapped a part of the uncovered palisade ditch, an arched ditch line was obtained, about 0.60 m deep. The palisade ditch is 0.50–55 m wide at the level of the subsoil, which narrows down to about 0.40 m at the depth of about 0.70 m. A ditch about 5.00 m long was discovered, with 16 postholes, of which some were emptied down to a depth of about 0.75 m. Except for numerous pieces of charred daub with imprints of light timber, modest remnants of secondarily baked pottery were found in the ruin layer. Almost entirely, these are parts of unadorned, larger vessels (pithoi), with unprofiled, and had a rounded rim and a long neck. The only detail that stands out in the pottery material is a part of cylindrical neck with a small, tunnel-shaped handle, modelled just below the rounded, unprofiled rim.

Just above the burnt tread surface, in the ruin layer of strongly baked earth and secondarily burned daub, of dark red colour and hollow structure, a large piece of black charred daub with traces of parallel imprints of thin logs was discovered, on top of which glued grains of some wheat remained, due to a strong fire. The finding of the entire bottom of a large vessel, with a diameter of 0.22 m, with the inner side facing down, also belongs to the same fire layer. After removing the bottom of the large pot (pithos), a circular area of dark burned earth with a large quantity of charred grains of some wheat was discovered. Two archaeological units are still noteworthy in the cultural layer, found at a distance of about 2.00 m from the palisade ditch. A smaller cluster of finely crushed stone, which was covered by strongly burned earth and parts of charred daub after the great fire, may be cautiously interpreted as a part of the destroyed structure of a short-lived

hearth. Much more interesting is the circular pit filled with earthen, fire material, embedded into the subsoil. A pit of irregular circular base, diameter of about 0.90 m, on the upper level, slightly narrows down to a depth of 0.75 m, and then is eccentrically deepened to a depth of 1.25 m. The diameter of the lower part of the pit excavation is only 0.30 m, which corresponds to placing a wooden post. Based on the shallow and rather wide recesses on the upper edge of the pit (two recesses are made opposite each other), erecting a massive wooden post was not an easy task.

Trench 8 (3 x 6 m) was placed perpendicularly to trench 4, in the south-eastern part of the enclosure, in the direction of trench 7. Differing from the previous trenches that partially flank or intersect a part of the wide earthen rampart, the methodology in excavating this area was partially changed, with the aim to emphasise a more detailed investigation of the palisade ditch with postholes. The rampart was removed up to a relative depth of 1.85 m within the trench (in previous trenches only the upper layers of the earthen embankment were investigated, 0.40–0.50 m deep), which is the depth where the original tread surface appears along with clear outlines of the embedded palisade ditch. In the upper level, the palisade ditch is of uneven width, 0.45–0.60 m, with traces of intensive fire along the edge of the excavation, in the form of wider bands of baked earth in a light red colour. The ditch slightly narrows down to a depth of about 0.50 m, where the foundations of the postholes are clearly outlined. It is obvious that the placing of the posts was made difficult for some reason, as shown by the oval-shaped pits, most often 0.20 x 0.30 m in diameter. In most postholes, a larger or smaller quantity of soot and pieces of charcoal was found.

Earth used to fill the ramparts is of light brown colour, sometimes yellow and green, of dusty and loess-like structure, with thin interlayers of bluish clay and small pebbles, without archaeological finds. The cultural layer that covers only one third of the investigated area, yielded rather modest archaeological finds. Similar to the situation from previous trenches, stronger and weaker baked earth dominates in the ruin layer, with numerous smaller pieces of daub with imprints of timber (some imprints belong to straight-cut semi-round logs, and some imprints of larger round logs have preserved traces of crust) and sherds of secondarily burned parts of unadorned, larger vessels.

At the level of the hard compacted tread surface, in some places with traces of soot and ashes, a part of the circular pit along the north-western corner of the trench was discovered, intersected by the southern profile of trench 4. Most probably this pit was also used for erecting the wooden post, and it is located about 2.00 m away from the palisade ditch.

The trench position, which mostly cuts into the rampart embankment, enabled an investigation of the earthen fortification layers up to the level at which the palisade ditch was buried. In the next period, it is envisaged to cut the rampart in its entirety in this part of the enclosure and extend part of the southern profile, most likely in the same direction, creating a wider ditch and, thus, create a cross-section across the moat.

Archaeological material as a basis for reconstruction of enclosure construction methods in Desić

Since the continuation of archaeological investigations at the site of Šančina has been planned, it is certain that new data on the construction of the enclosure will be added, and some of the current conclusions will inevitably be changed. On this occasion, we will first endeavour to briefly interpret the results of the geodetic survey and trench excavations in the first three years of investigation, and leave many questions open.

The prehistoric enclosure at the site of Šančina, in the territory of the village of Desić, is located on the slopes of the mountain Cer, facing the expansive Mačva plain and the Pannonian Basin. The circular enclosure was built at the foot of the hill, on a gentle slope forming a narrow extension (*lingula*), with a height elevation of about 200 metres above sea level. Since, in the previous part of the paper, we described in detail the appearance of the prehistoric enclosure before archaeological excavations, we will try to reconstruct the basic phases in the construction of the circular earthen fortification. Builders of the enclosure in Šančina were specialists in earth working, as can be seen from the regular shape of the conical elevation, along the perimeter of which a huge rampart of an unusually regular circular foundation was erected. The conical elevation and the rampart create the impression of a unique structure, which is elevated to about 6 m above the surrounding terrain. In all likelihood, the conical base for the rampart was created by reshaping the final part of the narrow extension of the gentle slope of the hill, the so-called lingula.

The central part of the enclosure is a circular space enclosed by an earthen rampart, surrounded by an un-

usually wide moat. The trough-shaped form of the moat was formed mostly by the passage of fast flowing watercourses, which meet on the western and northern sides of the structure. The external, somewhat lower earthen rampart, of a horseshoe shape, also belongs to the enclosure and it is best preserved on the eastern and northern sides. The most impressive part of the enclosure is the ring-shaped rampart made of deposits, of an ideal circular form, with a diameter of 25 m. The earthen rampart is of an unusually large size in comparison to the relatively smaller area of land surrounding it, with a preserved height of over 2.00 m, and a width of over 10 m at its base and about 3.5 m on the upper, predominantly flattened, upper level. According to the stratigraphy in trench 8, in the investigated part of the rampart at a depth of 1.85 m, a unique layer of light brown earth was found, with small pebbles and interlayers of light blue clay. The quality of soil with clay particles from the rampart corresponds to the soil at the bottom of the ditch and the soil from the immediate vicinity of the conical elevation where the enclosure was built. The appearance of the clay-like soil in the rampart is in direct connection with the soil that was created by the flow of mountain watercourses at the foot of the enclosure. The untypically wide moat, which surrounds the enclosure on all sides, has not been investigated in detail. The current trough-shaped form of the moat, with a wide and flattened bottom, testifies to large earthworks, created by shaping the inner and external ramparts. The Parlozi brook still flows on the western side of the moat, and even today, water is retained in some parts of it after heavy rainfall. It appears that the wide ditch around the enclosure was created by the deepening of smaller river courses from the western and northern sides, and more extensive works were done on the southern and eastern sides, which demanded the digging of the ditch from the upper level of the lingula. A deep, conical pit, intersected the final part of the tongue-shaped narrow slope of the hill on the southern part of the enclosure, and the wider earthen embankment (*Erdbrücken*) was placed over a part of the moat. Today, a horseshoe-shaped external "rampart" encloses the ditch from the eastern and northern sides of the enclosure, whereas the deep moat on the eastern side is flanked by the naturally steep slope of the nearby hill, and in the south it was created by intersecting the lingula where the rondel was built. It seems that the external, horseshoe-shaped rampart, with dimensions of 75 x 85 m, had only one function – to retain water in the deep ditch, and most likely its core forms the external part of the cut through lingula on the eastern and northern sides.

Archaeological excavations were directed towards the space bordered by the circular earthen rampart. The trenches that touched the upper level of the earthen embankment provided data on the existence of the circular palisade ditch, which was discovered right next to the inner edge of the wide stretched crown of the rampart. In all the discovered parts of the palisade ditch, with a total length of about 20 m, there were pits deeply dug into the subsoil, with traces of large burnt wooden posts. When the arched parts of the palisade ditch are connected from trenches 3, 4, 5, 7 and 8, a regular circle of the inner palisade is reconstructed, with a diameter of 21.50 m. The position of the wooden palisade suggests that in the first phase of the earthworks the centre of the future enclosure was designated, and then the palisade ditch was dug and large posts were vertically placed and densely packed next to each other. The wooden palisade was a part of the ring-shaped earthen fortification, in the capacity of a support on the inner side of the enclosure. Tall wooden posts, firmly driven into the subsoil, were most likely connected with intertwined wattle in the upper parts to be able to withstand the strong pressure of a large quantity of deposited earth, during the shaping of the rampart. We assume that the large posts were 4–5 m high, bearing in mind that the wooden posts most probably reached the rampart height or slightly exceeded it (the preserved height of the rampart is about 2.00 m), as well as the depth of the palisade ditch and postholes in the subsoil (about 1.50 m). A large quantity of daub with imprints of diverse timber were discovered just above the palisade ditch or in its close vicinity, which may indicate that the palisade, which bore the highest pressure of the rampart, was covered with mud on its lower parts. As a kind of a support of the rampart, properly cut bulks of earth with an unusually high concentration of coarse ware were used in the inner side of the palisade. The stratigraphic image in all the investigated trenches so far, which is about 30% of the total area of the inner part of the earthen fortification, testifies to a catastrophic fire, which was certainly the reason why the structure was permanently abandoned. At this point, it is difficult to find the source of fire, but the most intensive traces of a large fire were recorded in a zone of the palisade ditch, with the highest amount of organic matter for combustion. The burning layer expands

concentrically from the wooden palisade towards the enclosure's central part, to a length of several metres. At the enclosure's base, no traces of a permanent structure were recorded. There are archaeological traces that may be interpreted as remnants of smaller, short-term hearths, as well as several deep conical pits, at a large distance from each other. The form, content and manner of shaping single pits may be interpreted as holes intended for raising large wooden posts, each at a distance of about 5 m, creating a kind of inner circular ring of the enclosure. The central part of the enclosure was empty, with the thinnest cultural layer and sporadic finds of archaeological material that belongs to the stretched burnt layer. A great surprise awaited us at the very beginning of the archaeological works, in trench 1, which was placed on the flattened, central part of the enclosure. Here, a deep well/pit was discovered, with a funnel-shaped extension in the upper part and a narrow square bottom, with rounded corners. Traces of a wooden construction, which most likely existed above or in the upper layers of the funnel-shaped extension of the deep pit, were not preserved, if the pit served as a well for drawing water. The well/pit was investigated to the level of the emergence of underground water, when the works were stopped, at a depth of 6.30 m. It is difficult to rationally explain the digging of a well in the enclosure's central part, when there are several mountain watercourses and springs of potable water in the immediate vicinity of the earthen fortification. It seems rather unfathomable how the central part of the earthen fortification was reached and how the builders and users of the enclosure approached the deeply dug well. The almost perfect circle formed by the earthen ring was created in the second phase of work, after digging through the palisade ditch and erecting the tall wooden palisades. It is certainly no coincidence that the well/pit is not in the centre of the enclosure, but it is moved towards the western part of the palisade ditch by about 1 m. The position of the deep pit/well was most likely conditioned by the direction of basic communications in the central part of the enclosure. The huge circular rampart seems surprisingly uniform, without any visible discontinuities that could have been created by leaving a passage or during the building of one or two opposite gates, intersecting the earthen fortification. Therefore, we think that the uninterrupted palisade ditch was pre-designed and that the strong wooden palisade was built in a full circle, as a unique support for the earthen rampart. It is possible that earthen ramps were constructed, one of which was placed so as to access the enclosure from the outside, and the other led over the palisade ditch and lower wooden palisade to the well in the central part of the enclosure.

DISCUSSION

A circular enclosure with rampart from Desić and the main features of the Early Eneolithic culture in western Serbia

Summarising the results of the trench excavations in the first three years of the operation, we can single out basic elements that are specific to the circular enclosure in Desić: 1. Circular, wide and deep moat (ditch), of flattened bottom (appearance of the moat based on the existing condition); 2. Huge, circular earthen rampart, built in the inner side of the moat; 3. External earthen rampart, of horseshoe form, shaped from the outer side of the moat; 4. Inner wooden palisade, which supports the earthen rampart; 5. Deep pit/well in the central part of the circular enclosure.

The question of an entrance to the central part of the enclosure, i.e., the discovery of the gates that intersected the circular earthen rampart, remains a priority in future investigations. Before we embark on sketching some of the more complex issues of the cultural and temporal determination of the circular enclosure from Desić, we consider it useful to point out a few more elements obtained during the current archaeological works on this site. At this stage of the research, this archaeological data is insufficiently coherent and will definitely have to be examined in more detail in the future. In the group of portable archaeological finds, the following stand out:

– a modest number of ceramic finds from various archaeological units (deep pit/well, small hearths, postholes, palisade trench, rubble layer from the inner side of the ramparts

– crumbled and small pieces of house daub, mixed with baked earth, inside the rubble layer – slightly or heavily baked larger pieces of daub, with clear traces of different wood materials (branches, thin and thick round log, half-logs, large wooden supports). The highest concentration of baked daub was found in the immediate vicinity of the palisade trench, especially above the densely arranged postholes.

– modest remains of charred grains, which were placed in large ceramic vessels.

Pottery finds (Figs. 18–19)

Apart from a fragment of a hollow pedestal bowl from the deep pit/well in the middle part of the circular enclosure and a cup with two handles from the hearth in probe 4, we have a modest amount of ceramic fragments whose typology is not sufficiently clearly defined. These are mostly small, secondarily burned shards of pots with rather thick walls, which for now can be roughly classified into a group of undecorated pots of medium or, rarely, large size. The pots are characterised by a non-profiled rim, a straight cylindrical or conical neck and short, vertical, sometimes tunnel-shaped handles. Typologically, the most sensitive are small pots or large goblets with very short, vertical handles, modelled on the upper part of the cylindrical neck, just below the flattened rim. At the bottom of one pot or large goblet there is a regular circular hole, which indicates that the vessel was probably used for libation. The mentioned part of the vessel with an opening at the bottom was found in the rubble layer of trench 2, not far from the deep pit/well. In the group of small vessels of fine manufacture, we distinguish parts of dark brown or black-polished cups with two handles, which do not exceed the height of the rim. There is an obvious lack of bowls. Rare examples of shallow conical bowls with inverted rims most likely belong to the upper parts of hollow pedestal bowls, especially in cases where hornlike handles, modelled just below the rim, are preserved.

Microregional position, chronological framework and cultural orientation of the circular enclosure from Desić

In the history of the research of sites from late prehistory in the territory of north-western Serbia, a central place is occupied by numerous settlements of the Vinča culture from the Late Neolithic. Researchers mistakenly included the sites of *Šančine* and *Parlozi* in Desić in the multitude of about 250 Vinča settlements, spread over the relatively small geographical area of Mačva and Pocerina.[5] As we emphasised in the introduction, M. Vasiljević, the first researcher of the prehistoric sites in Desić, carried out smaller excavations in 1967 at the settlements in Parlozi and Šančine. This researcher, together with his colleague V. Trbuhović, reasonably connected these two sites from Desić into a single unit. The authors believed that both sites belonged to a group of several dozen fortified hill settlements of the late Vinča culture in the area of hilly, western Serbia.[6] Through systematic field surveys, the same authors identified unusually small „settlements" of a circular base, surrounded by a wide moat, in the area north of the mountain Cer. They were identified as sites of the „Obrovac" type, which is the local name for this type of archaeological site in Mačva.[7] On the basis of modest archaeological works, the researchers assumed that this type of circular site (mostly of small dimensions, 25–40 m in diameter) indicated life in the wetlands and that ditches were used to protect individual Neolithic households, i.e., housing units with modest auxiliary facilities. In a short summary of the article in *Starinar* by the same authors, the sites of the Obrovac type are described as "les petits tel(l)es".[8] The scarce archaeological data that accompanied brief reports from field surveys of „Obrovac-type settlements" from the area of north-eastern Serbia did not provide enough elements for their reliable typological classification. In the last ten years, the archaeological story about the enigmatic circular enclosures of the Obrovac type has been renewed, but still with modest results.[9] According to the short descriptions of the terrain morphology, a group of ten Obrovac-type sites („group with a depression in the central part") can be distinguished, which can cautiously be attributed to the Desić type, i.e., „circular earthen enclosures protected by a rampart" (Fig. 20). According to the few collected and published ceramic finds from several sites of the Obrovac type, which are stored in the National Museum in Šabac, these sites mostly belong to the post-Vinča period, i.e., the Early Eneolithic.[10] Of course, this does not exclude the presence of ceramics manufactured in the manner of the late Vinča culture at certain sites of the Obrovac type. Only a few Obrovac-type sites examined by probes provide data on portable archaeological finds, mostly fragments of ceramic vessels, which are roughly dated to the Late Neolithic/Early Eneolithic. More recent excavations of circular enclosures with a moat (Dublje, Lipolist) have shown that these objects are located in the immediate

---

[5] Trbuhović, Vasiljević 1972; Трбуховић, Васиљевић 1975; Трбуховић, Васиљевић 1983.

[6] Trbuhović, Vasiljević 1983.

[7] Trbuhović,Vasiljević 1972; Трбуховић, Васиљевић 1975; Трбуховић, Васиљевић 1983.

[8] Трбуховић, Васиљевић 1975, 161.

[9] Трипковић 2013; Трипковић, Церовић, Булић 2013; Tripković 2017; Трипковић at al. 2017; Tripković, Penezić 2017; Трипковић 2020, 172–194.

[10] cf. Stojić, Cerović 2011.

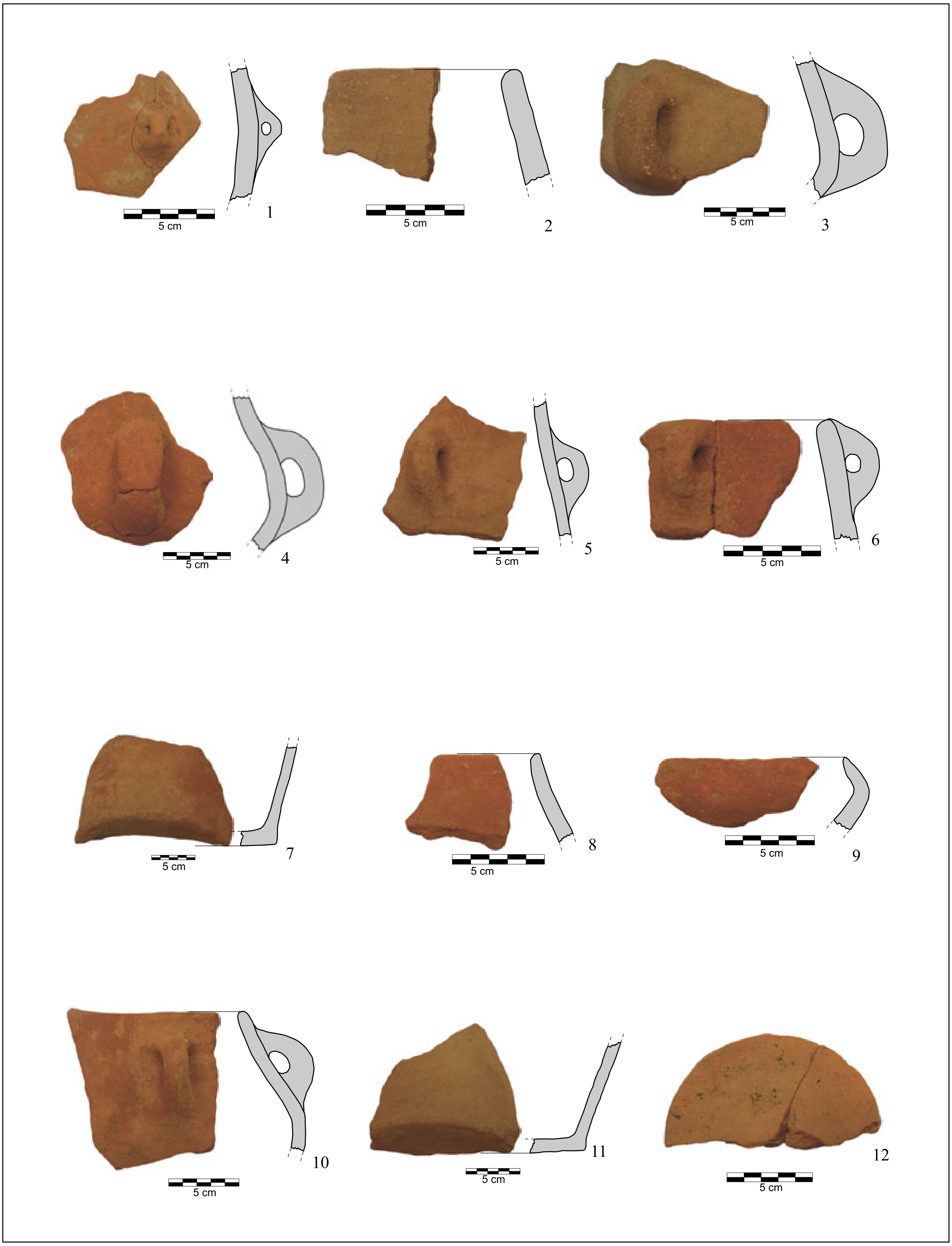


Fig. 18. Desić–Šančina, pottery finds from circular enclosure in Desić

Сл. 18. Десић–Шанчина, керамички налази из кружноī објекша у Десићу

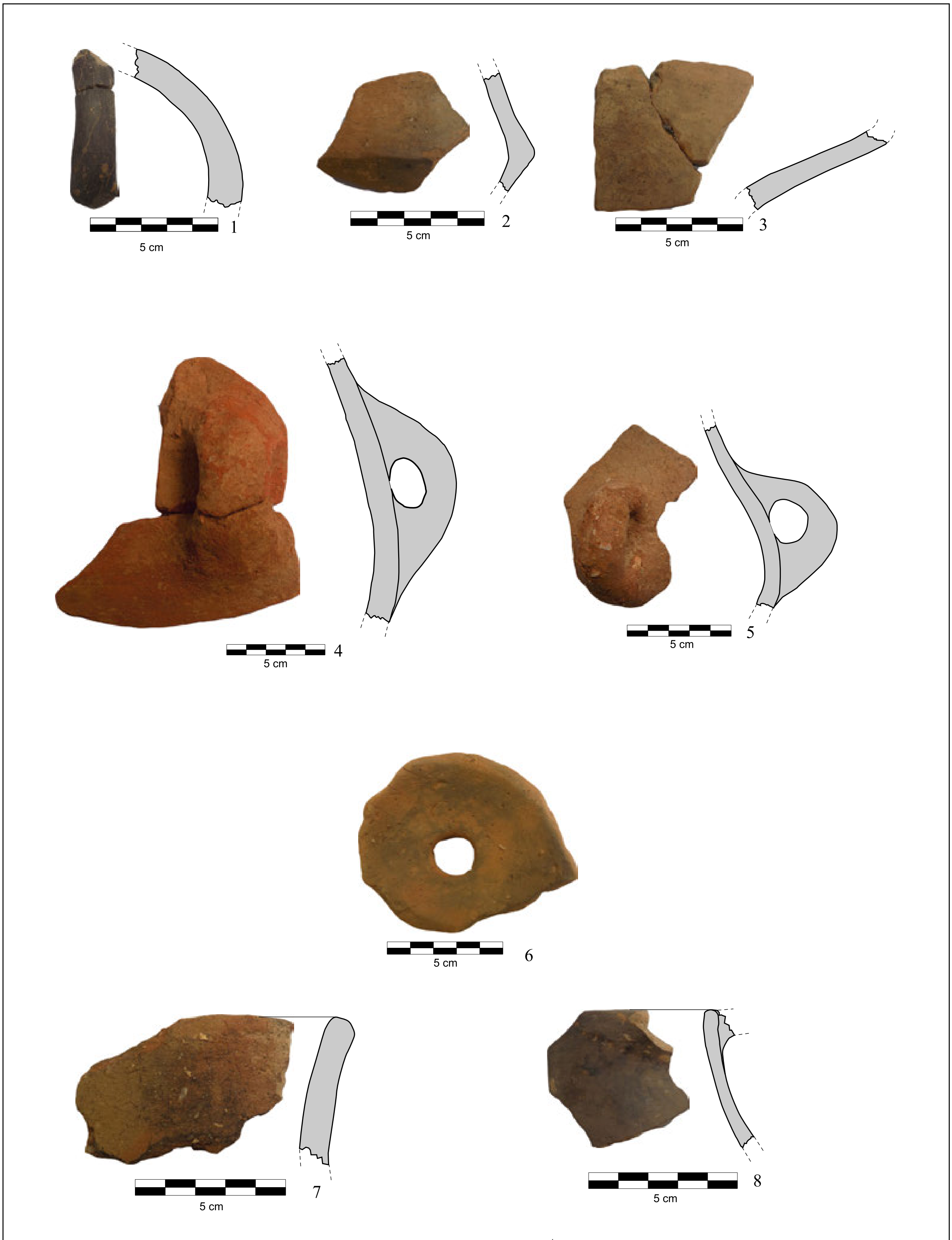
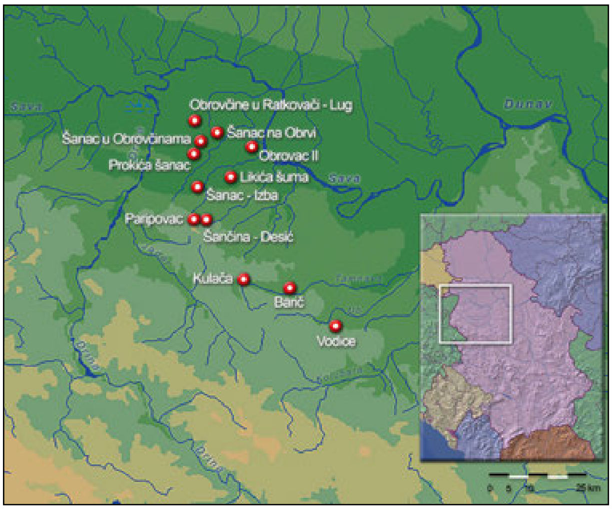


Fig. 19. Desić–Šančina, pottery finds from circular enclosure in Desić

Сл. 19. Десић–Шанчина, керамички налази из кружноī објекӣа у Десићу



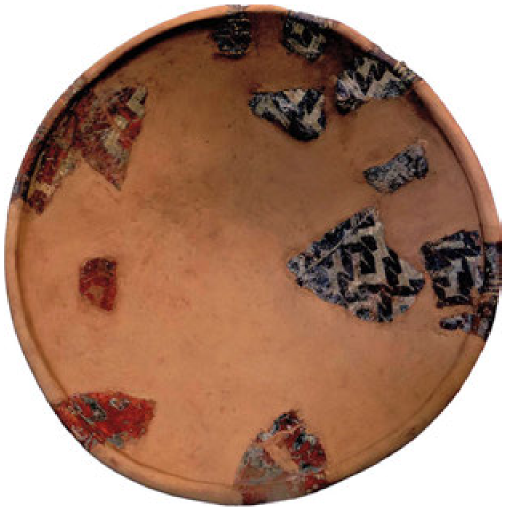


Fig. 20. Circular enclosure types of Desić in NW Serbia
Fig. 21. Lengyel type of painted bowl from Bogosavac near Šabac (National Musem Šabac)

Сл. 20. Кружни објекти типа Десић из СЗ Србије
Сл. 21. Сликана здела Лењђел типа из Богосавца код Шапца (Народни музеј Шабац)

vicinity or on the very site of open-type late Vinča settlements.[11] The possibility that some sites of the Obrovac type were created in the Late Neolithic, i.e., before the end of the Vinča world in the Central Balkans, is supported by an exceptional find of a large conical bowl, painted with a meander-like motif in white on the inside of the bowl, from the site of *Beljevine–Likića šuma* in Bogosavac, not far from Šabac, indicating the influence of the Lengyel culture (Fig. 21). The painted bowl was discovered under unknown circumstances, probably inside or in the immediate vicinity of an "obrovac", that is, a circular enclosure surrounded by a moat. It is interesting to note that the bowl from Bogosavac can typologically be compared with the so-called group of *ceramics with thick walls* from the *Bučani* site (Trnava Region) in the south-western part of Slovakia, where a settlement and circular enclosure of the „Neolithic rondel" type (Kreisgrabenanlagen) from the later phase of the Lengyel I (Nitriansky Hrádok) group were discovered.[12] According to the collected surface finds of ceramics and flint, it seems that the Obrovac from Bogosavac was built on the remains of a Vinča settlement, so one cannot exclude the possibility that the Lengyel painted pottery originates from a Vinča culture settlement.[13] Bearing in mind the current level of research of circular enclosures with a ditch from Mačva and Pocerina („Obrovac-type sites"), the time frame and cultural affiliation of this type of site has not been reliably determined. The circular enclosure from Desić, surrounded by an unusually wide moat, with an inner palisade and a huge rampart, is quite different in its position and appearance from other Obrovac-type sites. Ceramic finds from Desić clearly show that the circular enclosure belongs to the post-Vinča period, that is, the Early Eneolithic. The continuation of research at this site will certainly provide more data to allow a more accurate chronological determination. Analogies to the ceramic material from Desić discovered and examined so far indicate a developed or later phase of the Early Eneolithic. When it comes to the cultural determination of the circular enclosure from Desić, there is a problem, since the culture of the Early Eneolithic on the territory of western Serbia is insufficiently known. The end of the Vinča culture from the Late Neolithic in the north-western parts of Serbia, especially in the area of Mačva and the northern parts of Pocerina, brought drastic changes in the structure of settlement. Life disappeared in numerous settlements of Vinča and, for an insufficiently clear reason, there was a huge

11 Tripković 2017; Трипковић at al. 2017.
12 Bujna, Romsauer 1986, 34, Abb.4.
13 Vasiljević, Trbuhović 1972, 184; Васиљевић, Поповић 2002, 12; Стојић, Церовић 2011, 70–71.

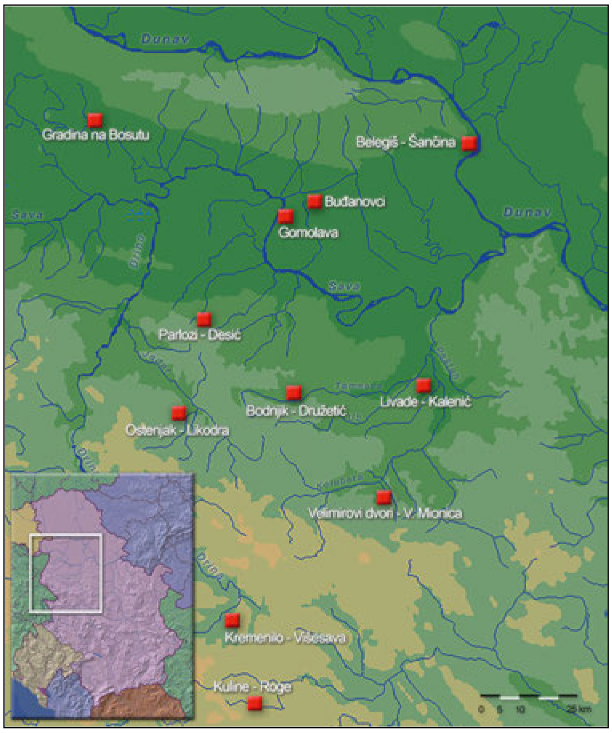


Fig. 22. Early Copper Age settlements in western Serbia

Сл. 22. Насеља раної бакарноі доба у западној Србији

depopulation of these areas. A good example is the multi-layered prehistoric settlement of *Benska bara* in Šabac, which is dominated by a horizon of the Vinča settlement, with clearly expressed elements of the Tisza culture. At the beginning of the Eneolithic, life in this spacious, open-type settlement ended and was renewed again only in the Late Eneolithic.[14] Only a few small settlements, predominantly hillfort settlements, have been attributed to the period of the Early Eneolithic on the territory of western Serbia (Fig. 22). We do not have clear data on the Early Eneolithic horizon at the site of *Kulina–Roge*, in the Veliki Rzav canyon (between Ivanjica and Požega), from where an undecorated cup with two handles, characteristic of the Bubanj I culture, i.e., the Bubanj–Salcuța–Krivodol complex, originates (Zotović 1985, T. III/7). Modest finds of ceramics with general characteristics of Early Eneolithic cultures were discovered at the *Velimirovi dvori* site in Mionica near Valjevo.[15] New trench excavations on a multi-layered prehistoric hillfort settlement at the site of *Ostenjak* in Likodra near Krupanj confirmed two residential horizons from the Eneolithic – a later layer with characteristics of the Boleraz–Černa Voda culture, and an earlier one from the Early Eneolithic, without sufficiently clear characteristics for a closer cultural determination.[16] A little more data was obtained from the research of two open-type settlements, namely *Bodnjik* in Druzetić near Koceljeva and *Livade* in Kalenić near Ub.[17] Both settlements are attributed to the horizon of the Bubanj I culture (Bubanj –Hum Ia, according to M. Garašanin), with a strong influence of the Western Pannonian cultural circle (late Lengyel) and the Tisza–Danube River Basin circle (Tiszapolgar/Bodrogkeresztur). The penetration of Pannonian elements from the later phase of the Early Eneolithic through the Drina river valley was recorded at the multi-layered prehistoric settlement of *Kremenilo* in Višesava near Bajna Bašta, as evidenced by the finds of ceramic vessels of the Bodrogkeresztur culture.[18] Single and group finds (15 sites) of copper, double-edged axes with holes for handles, the so called shaft-hole tools, that is, adze-axe types of implements, which are similar in shape to several finds of axes from southern Syrmia, belong to the Early Eneolithic in the area of southern Mačva and Pocerina (Fig. 23). The largest number of these tools belong to the Jászladány type axes, with the same length of both criss-cross blades.[19] The accidental find of a well preserved Jászladány-type axe comes from the site known as the „Forest above the Monastery in Radovašnica" (Fig. 24), which is in the immediate vicinity of the settlement at Parlozi and the circular enclosure at Šančine in Desić.[20] Archaeological data on the presence of cultures from the Early Eneolithic on the territory of north-western Serbia are very scarce and are mainly based on the identification of a few typical forms of ceramic vessels. Cups with two handles that end at the height of the rim are most often considered a sure sign that the Bubanj I culture prevails in the areas of western Serbia, although similar or almost the same vessel forms are found among ceramic forms of the late Lengyel (Lengyel IV) or Epi-Lengyel group on the territory of Transdanubia and Lower Austria, as well as

---

[14] Трбуховић, Васиљевић 1983, 26–44; Стојић, Церовић 2011, 149–173.

[15] Stevanović 1998.

[16] Булатовић and al. 2013, 77–84, T. II-III; Булативић, Филиповић, Глигорић 2017, 182–191, T. XLV/1–12.

[17] Палавестра, Богдановић, Старовић 1993; исти, 1996; Б. Јовановић 2005; Благојевић 2005; Живановић 2013.

[18] Zotović 1963; Zotović 1985, T. III/5,6,10.

[19] Церовић 2002; Antonović 2014.

[20] Стојић, Церовић2011, 131–132, 394 (Photo. 113).

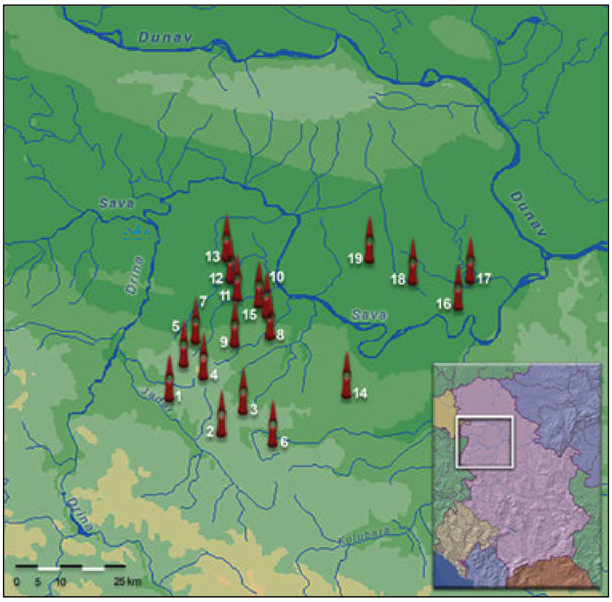




Fig. 23. Copper adze-axe type of implement from NW Serbia
Fig. 24. Jászladány type axe from Radovašnica (National Musem Šabac)

Сл. 23. Бакарне крсшасше секире из СЗ Србије
Сл. 24. Бакарна секира Јасладањ шиūа из Радовашнице (Народни музеј Шабац)

in the Ludanice group from south-western Slovakia.[21] The ceramic finds from Šančina in Desić, which are characterised by undecorated vessels, seem to have the most similarities with ceramics from the last phase of the Lengyel culture, with some shapes reminiscent of vessels of the early Bodrogkeresztur group, and with somewhat fewer similarities with Balaton I–Lasinja type ceramics.[22] In researching the influence of Early Eneolithic cultures from the eastern and western part of Pannonia in the following period, it is necessary to see more clearly the development of contemporaneous cultures in the area of Syrmia and southern Bačka.

Main features of circular ditch enclosures (*Kreisgrabenanlagen* or *Neolithic rondels*) in Central Europe

We may attribute the circular earthen fortifications at the archaeological site of Šančina in Desić to the special *Circular ditch and palisades systems* originated in the Carpathian Basin during the Late Neolithic and the Early Eneolithic. Before we propose the time frame for the construction of the circular enclosure in Desić, it is necessary to briefly look back at the history of investigations of Neolithic circular ditch enclosures (so-called *rondels*) in continental parts of Europe.

Until the 1970s, *circular ditch enclosures* were unknown as a form of prehistoric site in the region of Central Europe. All circular earthen fortifications, most often enclosed by one or more ditches, were simply classified in the group of Neolithic fortified settlements, irrespective of their shape and size.[23] In the early phase of investigations, the palisade enclosure of *Schalkenburg,* near *Quenstedt*, in the vicinity of Halle (arranged in the form of multiple circles), drew special attention, and it was declared as the first site of the "Woodhenge" type in Central Europe.[24] Systematic investigations of circular earthen structures, enclosed by ditches, started under the name *Kreisgrabenanlagen* within the classical phase of the Lengyel culture and the simultaneous phase of the *Stichbandkeramik* culture.[25] Similar earthen structures in the territory of the former Czechoslovakia had the name *rondels*. The term "Neolithic rondels", as well as the term "archaeology of rondels", was used by Vladimir Podborský, after many years of investigating archaeological sites and publishing an extensive monograph about the site of *Těšetice–Kyjovice*, in the South Moravian region, the Czech Republic.[26] Thanks to extensive archaeological works (1968–1978), a rondel of medium size was investigated almost in its entirety on the site between the villages of Těšetice and Kyjovice, having a wider ditch, two

[21] Lihardus, Vladar 1964; Pavúk 2000.
[22] Barna 2019; Regenye 2020.
[23] Neustupný 2006; Podborský, Kovárnik 2006.
[24] Behrens, Schröter 1979; Behrens 1981.
[25] See articles in the book: Int. Symp. über die Lengyel – Kultur, Nitra-Wien 1986.
[26] Podborský, 1988, 171.

concentric series of palisades within the ditch, and a peripheral wooden palisade.[27] Two sites with large circular enclosures (rondels) from south Slovakia stand out, with the system of two-fold ditches and inner wooden palisades. One site is *Svodin,* not far from the Danube, with two circular ditch enclosure and large settlement of the Lengyel culture (*Lengyel* I).

Within the Neolithic settlement, a smaller circular rondel, with a diameter of about 60 m (Svodin I) was firstly built. In the next construction phase, a larger rondel was built around this one (Svodin II), with an oval base (110 x 160 m), and with two wide ditches and three inner palisades.[28] The second site is the Neolithic settlement, with painted pottery of the Lengyel culture, of *Bučany* near Trnava, where a rondel of medium dimensions was discovered, with two concentric ditches, four pronounced entrances and a structure with a rectangular base with vertical wooden beams (7.5 x 15 m), built against an inner palisade.[29] In the territory of Lower Austria, there are two large rondels (*Kreisgrabenanlagen*) that stand out, *Kamegg* and *Friebritz*, from the first phase of Lengyel culture, which are characterised by unusually wide, two-fold ditches.[30] Prehistoric rondels, better known as *Kreisgrabenanlagen*, were discovered in southern Bavaria, in central and eastern parts of Germany, particularly in the province of Saxony-Anhalt.[31] Individual rondels were found in the region of the Rhine and Upper Danube region, and recently in the north-eastern parts of Germany[32] and south-western parts of Poland.[33] The majority of rondels found outside the Lengyel culture belong to the Neolithic Linear Pottery culture, with banded punctuations (*Stichbandkeramik Kultur*), classified into the Middle Neolithic in Germany. Thanks to new methods of air prospection (the so-called *Luftbildarhäologie*) and geophysical, primarily geomagnetic, field survey, in the last three decades the search for prehistoric rondels has been intensified. A quest for circular earthen fortifications from the Neolithic period and earlier prehistoric epochs has spread far beyond the region of Central Europe. Ariel footage of some thirty circular objects, enclosed by ditches and earthen ramparts, was compiled in the Sevastopol region, in the northern part of the Caucasus (Russia). It is interesting that on recorded bases of the circular structures from the Caucasus, neither passages going over the ditches nor interruptions in the ramparts are noted, which would have been expected with earthen structures of larger dimensions. Initial trench investigations and collected surface findings place the circular earthen structures from the Caucasus in the post-Neolithic period (4th millennium BC). In any event, these circular structures have been interpreted as the most eastern prehistoric rondels in Europe.[34] Some smaller rondels from the Moravian region were also attributed to the post-Neolithic period, i.e., to cultures from the Early Bronze Age.[35] About the same period, at the end of the 3rd millennium, a rondel of the palisade type originated from *Pömmelte*, between Magdeburg and Halle (Saxony-Anhalt), which was ideally reconstructed "*in situ*", as a kind of circular sanctuary. The rondel from *Pömmelte* consists of a ditch enclosed by an earthen rampart, three inner wooden palisades and peripheral circular palisade. This *Palisadanlage* was recorded by André Spatzier as a rondel of the *Henge* type.[36] A special place in the investigation Neolithic rondels on the territory of Germany belongs to the site of *Goseck* near Leipzig. It is a rondel of medium dimensions (with a diameter of about 75 m), which was interpreted as the earliest monumental and cult structure in Europe, built around 4900 BC.[37]

When it comes to circular earthen fortifications from Desić, south of the Sava river, investigations of rondels of the Lengyel culture on the territory of today's Hungary are of great significance. On the occasion of the publication of a catalogue about the archaeological site of Těšetice–Kyjovice, V. Podborský included only three rondels from the northern part of Hungary in a catalogue of 60 rondels, which in the majority belong to the early classical phase of the Lengyel culture from the region of Central Europe.[38] In a recently published inventory of rondels from the Late Neolithic in the territory of western Hungary (Transdanubia) there are about 30 archaeological sites, of which some were recorded only on basis of ariel

---

27 Podborský 1988, 73, Obr. 62; 271, Obr.175.

28 Nemejcová-Pavúková 1986,179, Abb.1.

29 Bujna, Ramsauer 1986, 27/28, Abb. 1–2).

30 Trnka 1986, 291, Abb. 1; Trnka 1994, 236, Abb. 4; Neugebauer 1986, 186, Abb.1.

31 Petrasch 1986; Petrasch 1990.

32 Meyer 2011.

33 Milo et al. 2015.

34 Belinskiý, Fassbinder, Reinhold, 2011, 106–107; Fassbinder et al. 2013.

35 Kovarnik 2003.

36 Spatzier 2007; Spatzier 2017.

37 Bertemes, Northe, 2007.

38 Podborský 1988, 187, 190–191.

footage.[39] The greatest number of discovered rondels of the Lengyel culture in the Carpathian Basin so far has originated from the relatively small area of east Baranja and the region of Zala, in the south-western part of Transdanubia. The so-called three-fold rondel at the site of *Nagykanizsa – Palin* stands out, located in the vicinity of Lake Balaton, in the region Zala.[40] The inner part of this rondel had almost no archaeological material.

The greatest part of portable archaeological finds originates from the investigated areas within the ditches. Numerous finds of geometrically painted pottery, in the manner of the classic Lengyel culture, were discovered in the ditches along with pieces of anthropomorphic figurines, miniature alters of geometrical shape, as well as a great number of animal bones, equal amounts of both wild and domesticated species. In the vicinity of Nagykanizsa, there is a place called *Sormas* with an open Neolithic settlement of large dimension, in whose complex two large circular structures were discovered, side by side (Sormas I, Sormas II).[41] In the territory of the eastern part of continental Croatia (Osijek–Baranja County), the so-called "circles counterparts" have been recently located using ariel prospection, and are attributed mainly to the Late Neolithic, which is visually reminiscent of dual rondels in southern parts of Transdanubia.[42] Previously discovered and partially explored rondels in the territory of western Hungary (Transdanubia) belong almost completely to the classical phases of the Lengyel culture (Lengyel I–II), i.e., to the period of the Late Neolithic. Circular structures enclosed by a system of ditches (diameter between 100 and 200 m), are most often located in the immediate vicinity or they present an integral part of the open, single-layered settlements of large dimensions. Circular ditch and palisade enclosures from several sites in north-eastern Hungary attracted most of our attention, particularly from the Upper Tisza region. Large archaeological works, led by *Pál Raczky,* at the well-known Late Neolithic settlement of *Polgár–Czöszhalom* in the Upper Tisza region, caught the special attention of archaeologists investigating early agricultural communities in the wider region of the Carpathian Basin.[43] This is a very complex system of arranging these a settlements from the Late Neolithic, consisting of two separate units. The first is a rather spacious and open settlement, arranged horizontally over an area of about 30 ha, specific for the Lengyel type of settlement from Transdanubia. The second is a circularly arranged closed space enclosed by a complex system of multiple ditches and wooden palisades, based on multiple-layered settlements of the Tisza culture (*Tisza–Herpály*) in southern parts of the Great Hungarian Plain. A tell in the *Polgár–Czöszhalom* settlement, with a diameter of up to 190 m, was interpreted as a kind of cult place, i.e., a sacral centre of a broader Late Neolithic community in this part of the Upper Tisza region. When it comes to the open settlement at the site of *Polgár–Czöszhalom*, which was, thanks to protective works, investigated over an area of 4.5 ha, one piece of data is particularly notable – 68 wells were discovered, located in the vicinity of the rectangular houses. Almost at the bottom of one of the water wells, a separate cult pit was found, with a pottery hoard of over 80 ceramic, predominantly complete, vessels, which was closed with a pile of baked house daub.[44]

We need to acknowledge that the connections of our rondel in Desić with Neolithic rondels from the Carpathian Basin are rather slim. By all accounts, it appears researchers who think there are no two identical Neolithic rondels are right, and each object is an individual "structure" (*monument*), which was designed by one constructor.[45] Certainly, the diversity in construction of prehistoric rondels in Central Europe is one of the main reasons why the rare attempts to classify, i.e., to devise a typology of this type of earthen fortification have provided only modest results. It is difficult to compare rondels of circular or oval shape, whose dimensions vary from 30 to 300 metres in diameter.[46] Observing the broader context of the prehistoric rondel phenomenon, the only mandatory criterion could be questioned – the existence of a circular ditch around the rondel – if we add to this form of archaeological site (a kind of "unit") the earthen structures protected only with a circular wooden palisade (*Palisadenringanlagen*) or the assumed existence of earthen ramparts.[47]

---

39 Barna et al. 2016, 321–324, Fig. 1.

40 Barna et al. 2016, 316–317, Fig. 9,10.

41 Barna et al. 2019, 128–132; Kravciv 2019, 245–247, Obr. 209.

42 Kalafatić, Šiljeg 2018.

43 Raczky, Anders 2008; Raczky, Anders, Bartosiewicz 2011; Raczky, Anders 2012; Raczky, Sebok 2014; Raczky 2019.

44 Raczky, Anders 2008, 43, Fig.4.

45 Literski, Nebelsick 2012, 435.

46 Barna 2017, 25.

47 Conrad, Tinapp, Herbig 2016; Meyer, Reatzel-Fabian 2006. 15.

FINAL CONSIDERATIONS

Small enclosure with rampart from Desić in the Pannonian circle of Early Copper Age culture

It is important to note that circular ditch and palisade enclosures of smaller dimensions, like that in Desić, were recorded in the territory of the Carpathian Basin, east of the Danube, in cultures of the Early Copper Age (the Chalcolithic). Several specifically built enclosures were discovered in the partially investigated Upper Tisza region in the Great Hungarian Plain. Predominantly, these are circular enclosures of the Tiszapolgár culture (or time?), discovered south of the Late Neolithic settlement of *Polgár–Czöszhalom*, in the valley of the river Tisza and in the lower course of the Körös river.[48] The circular enclosure found at the site of *Füzesabony–Pusztaszikszó* is especially important for the study of the rondel from Desić .[49] It is a small rondel, of about 30 m in diameter, with a twofold palisade ditch and one uncovered passage on the southern side. A twofold ring of vertically planted wooden posts, placed at a large distance from each other, encloses a deep pit/well in the central part of the enclosure.[50] The well, as the only significant archaeological entirety within the enclosure at the site of *Füzesabony–Pusztaszikszó,* was definitely used for cult purposes. An abundant quantity of red baked daub fills the entire well, from top to bottom, up to the level of underground waters at a depth of 4.5 metres. Beneath the baked daub, there was a goat skeleton and several bones of other animals, as well as a hoard of 16 ceramic vessels. Pottery found at the bottom of the ritual well is attributed to the so-called Ludanice style group of the Late Lengyel (Lengyel IV / Epi-Lengyel), which dates back to the end of the 5th millennium BC. Classic C-14 dates from six samples of charcoal provide dates for the circular enclosure near *Füzesabony* (4350–4250 BC). A circular enclosure of a small dimension with a well in the central part was discovered in the prehistoric settlement of *Szarvos*, site 38, in the valley Körös.[51] According to the modest archaeological works, the enclosure with a wide and circular ditch of about 35 m in diameter was reconstructed, with a circular palisade placed from the inside and outside the ditch. The well, about 3.00 m deep, is somewhat wider in the upper part and of a square shape that transitions into a narrower cylindrical part. We have no data regarding the well's content. It can only be highlighted that 17 layers of earth within the well were singled out, which indicates that it was successively filled with earth, most likely over a long period of time. According to the pottery finds, the rondel at Szarvas is approximately dated to around 4000 BC, in the time of the so-called transition period between the Tisapolgár and Bodrogkeresztur culture.[52]

A short overview of mostly Neolithic and several circular enclosures from the Early Copper Age in the territory of Central Europe and particularly the Carpathian Basin, indicates more the individual features of the rondel from Desić than it enables a simple classification and attribution to one of the groups of this type of circular earthen structures. Most problems in trying to typologically classify the circular enclosure from Desić are caused by a lack of passages, i.e., gates leading to the central part of the structure. Also, the unusually well-preserved earthen rampart separates the rondel on the northern slopes of the mountain Cer from other prehistoric rondels in Central Europe. The archaeologist Vjera Nemejcová-Pavúková, who investigated the rondel in Svodin, is one of the few who wondered where all the earth thrown out of two very wide circular ditches protecting the structure had disappeared to.[53] The author assumed that in the course of constructing a larger enclosure in Svodin, a huge rampart had been built between the two inner wooden palisades, using the earth from the ditches. The inner palisades, preserved as narrow palisade ditches, thus, gain a defensive function, as is the case with the inner palisade of the enclosure from Desić. A similar opinion about the relationship between one or more inner palisades and the assumed earthen embankments of *Kreisgrabenanlagen* by Jörg Petrasch, assumes that in some cases it denoted a rather complex system of construction of earthen fortification, known from the earlier periods as a construction using the so-called "*Holz-Erde-Mauer*" technique.[54] According to some archaeologists, a lack of ramparts in Neolithic rondels may be interpreted as a situation whereby the excavated earth from the ditches was simply spread outside the circular earthen structure.[55]

---

48 Raczky, Anders 2012, 300–303, Fig. 1.

49 Kállay 1988; Kállay 1990; Bánffy, Bondár, Virág 2003, 132–137; Raczky, Anders 2012, 303.

50 Raczky, Anders 2012, Fig.28.

51 Raczky, Anders 2012, 303, Fig. 29.

52 Raczky, Anders 2012, 303.

53 Nemejcová-Pavúková 1986, 180.

54 Petrasch 1990, 473–476.

55 Podborský 1988, 254–255; Podborský, Kovárnik 2006, 59.

Certainly, the two circular enclosures from the Early Copper Age (*Füzesabony–Pusztaszikszó, Szarvas 38*) attract the greatest attention, located in the eastern part of Hungary, with excavated deep pits/wells in the centre of earthen-palisade forts. The ritual role of the well from Füzesabony is particularly emphasised, due to presence of sacrificial gifts at the bottom of the pit. The deep pit/well in the centre of the enclosure in Desić does not have archeologically proven finds that are classified as cult objects, but it is difficult to imagine that it was used only as a source of potable water. The relatively fragmented finds of ceramic vessels from *the rondel* in Desić present, for now, the only finds that can help us to roughly estimate the time of construction of this earthen fortification.

So far, based on the reconstructed forms of vessels from Desić, one thing is certain: the circular enclosure with a rampart belongs to the post-Vinča period of the Early Copper Age. Some of typologically distinct features of the vessels, such as the beaker with a circular mouth on a hollow foot or the undecorated double-handled beaker with handles that do not exceed the rim height, point to influences of the Early Eneolithic cultures from the Carpathian Basin, primarily from the Late Tiszapolgár/Early Bodrogkeresztur cultural horizon and Ludanice (or some other) group of the Late (Lengyel IV) or Epi- Lengyel, which are roughly dated to the last century of the 5th millennium BC. The relatively modest selection of pottery forms discovered within the palisade ditch of the circular enclosure in Desić may be cautiously connected to the pottery finds from several open settlements of the Early Eneolithic in the territory of north-west Serbia, primarily to some of the unornamented vessels from the prehistoric settlement of *Bodnjik* in Družetić near Koceljeva.[56] Forms of vessels from the Early Eneolithic settlement of *Livade* in Kalenić near Ub are typologically very close to the pottery from the circular enclosure in Desić.[57]

Taking into account the typological similarities of the pottery from Desić and the pottery from the Late Tiszapolgár group and Ludanice group, as well as the proposed dates for settlements of the Early Copper Age at Livade–Kalenić and Bodnjik–Družetić, we may assume that the circular enclosure in Šančina was built at the end of the 5th millennium BC. We expect that several C-14 tests of the collected larger pieces of charcoal and especially well-preserved grains of charred wheat from the circular enclosure in Desić will provide more reliable chronological timeframes.

The question of the cultural origin of the settlement from the Early Copper Age in the area of the village of Desić near Šabac, as well as the reason for building a smaller circular enclosure with a huge earthen rampart in its vicinity, will be left open until the next phase of archaeological investigation.

Translated by Ksenija Dunjić Pavlović

56 Палавестра, Богдановић, Старовић 1993; ibid 1996; Живановић 2013.

57 Blagojević 2005; Blagojević 2014.

BIBLIOGRAPHY:

Antonović 2014 – D. Antonović, Kupherzeitlischen Äxte und Beile in Serbien, *Prähistorische Bronzefunde*, Vol. 9, Band 27, Mainz 2014.

Bánffy, Bondár, Virág 2003 – E. Bánffy, M. Bondár, Zs. M. Virág, Copper age religion and beliefs. In: *Hungarian archaeologye at the turn of the millennium* (eds. Visy, Nagy), Budapest 2003, 71–78.

Barna 2017 – J. P. Barna, Light in the circle. The natural light and the oldest monuments of Central-Europe. In: *The Archaealogy of Light*, Baja 2017, p. 13–56.

Barna et al. 2019 – J. P. Barna, G. Serlegi, Z. Fullár and E. Bánffy , A circular enclosure and settlement from the mid-fift millennium BC at Balatonmagyaród-Hídvégpuszta. In: *„Trans Lacum Pelsonem" – Prähistorische Forschungen in Südwestungarn (5500–500 v. chr.). Prehistoric research in South-Western Hungary (5500–500 BC)* (eds. E. Banffy, J. P. Barna), Rahden/Westf. 2019, 117–160.

Behrens 1981 – H. Behrens, The first "Woodhange" in the Middle Europe, *Antiquity* 55 (1981), 172–178.

Behrens, Schröter 1979 – H. Behrens, E. Schröter, Das Erste neolitsche "Woodhange" in Mitteleuropa, *Das Altertum* 25 (1979), 148–152.

Belinskiý, Fassbinder, Reinhold, 2011 – A. Belinskiy, J. W. E. Fassbinder, S. Reinhold, Caucasian ring ditches – The easternmost prehistoric rondels in Europe. In: *Archaeological prospection* (eds. M. G. Drahov, M. A. Berge), Izmir 2011, 106–107.

Bertemes, Northe, 2007 – F. Bertemes, A. Northe, Der Kreisgraben von Goseck. Ein Beitrag zum Verständis früher monumentaler Kultbauten Mitteleuropas, *Vorträge des 25. Niederbayerischen Archäologentages*, Rahden/Westf. 2007, 137–168.

Благојевић 2005 – М. Благојевић, Керамичке посуде из раноенеолитске куће са локалитета Ливаде, Каленић у *Колубара 4* (eds. Ч. Јордановић, Б. Јовановић), Београд 2005, 31–77. (M. Blagojević, Keramičke posude iz ranoeneolitske kuće sa lokaliteta Livade, Kalenić in *Kolubara 4* (eds. Č. Jordović, B. Jovanović), Beograd 2005, 31–77).

Blagojević 2014 – M. Blagojević, Transition from Late Neolithic to Eneolithic in Western Serbia in the Light of Recent Research – archaeological rescue excavations in the Kolubara mining basin. In: *The Neolithic and Eneolithic in Southeast Europe* (eds. W. Schier, F. Droșovean), Radhen/Westf. 2014, 187–212.

Bujna, Romsauer 1986 – J. Bujna, P. Romsauer, Siedlung und Kreisgrabenanlage der Lengyel-Kultur in Bučany, *Internationales Symposium über die Lengyel – Kultur* (Nové Vozokany 1984), Nitra–Wien 1986, 22–35.

Булатовић et al. 2013 – А. Булатовић, Х. А. Банкоф, В. Филиповић, С. Митровић, Сондажно рекогносцирање локалитета Остењак у селу Ликодра код Крупња. *Резултати нових археолошких истраживања у северозападној Србији,* Београд 2013, 77–84. (A. Bulatović, H. A. Bankof, V. Filipović, S. Mitrović, Sondažno rekognosciranje lokaliteta Ostenjak u selu Likodra kod Krupnja. *Rezultati novih arheoloških istraživanja u severozapadnoj Srbiji,* Beograd 2013, 77–84).

Булатовић, Филиповић, Глигорић 2017 – А. Булатовић, В. Филиповић, Р. Глигорић, *Лозница – Културна стратиграфија локалитета у Јадру, Рађевини и Азбуковици*, Београд–Лозница 2017. (A. Bulatović, V. Filipović, R. Gligorić, *Loznica – Kulturna stratigrafija lokaliteta u Jadru, Rađevini i Azbukovici,* Beograd–Loznica).

Церовић 2002 – М. Церовић, Бакарне сјекире из археолошке збирке Народног музеја у Шапцу, *Museum* 3, Шабац, 2002, 37–56. (M. Cerović, Bakarne sjekire iz arheološke zbirke Narodnog muzeja u Šapcu, *Museum* 3, Šabac, 2002, 37–56).

Conrad, Tinapp, Herbig 2016 – S. Conrad, Ch. Tinapp und Ch. Herbig, Eine polykulturelle Fundstelle mit Resten einer neolithischen Palisadenringanlage auf dem Mutzschener Berg (Lkr. Leipzig), Ausgrabungen in Sachsen 5, *Arbeits- und Forschungsberichte zur sächsischen Bodendenkmalpflege*, 31, Dresden 2016, 168–181.

Fassbinder et al. 2013 – J. W. E. Fassbinder, A. Belinskiy, R. Linck, S. Reinhold, Prehistoric ring monuments in Northern Caucasus (Russia): Reomote sensing, large-scale magnetic prospecting and first test excavations. In: *Archaeological Prospection: Proceedings of the 10th International Conference* – Vienna May 29th – June 2nd 2013, (eds. W. Neubauer, I. Trinks, R. B. Salisbury), Austrian Academy of Sciences Press, Vienna 2013, 1–3.

Јовановић 2005 – Б. Јовановић, Порекло и релативна хронологија раног енеолита западне Србије, *Колубара* (ур. Ч. Јоровић, Б. Јовановић), Београд 2005, 11–17. (B. Jovanović, Poreklo i relativna hronologija ranog eneolita zapadne Srbije, *Kolubara* (eds. Č. Jordović, B. Jovanović), Beograd 2005, 11–17.

Kalafatić, Šiljeg 2018 – H. Kalafatić, B. Šiljeg, Krugovi parnjaci: novi uvid u neolitičke obrasce naseljavanja, *Prilozi Instituta za arheologiju u Zagrebu*, 35 (2018), 71–111.

Kállay 1988 – Á. Sz. Kállay, Rézkori áldozati leletegyüttes Füzesabony határában (rezime: Kupferzeitlicher Opfer Fundkoplex in der bemerkungen Füzesabony), *Agria* 24, Eger 1988, 21–50.

Kállay 1990 – A. Sz. Kállay, Die Kupherzeitliche Ringanlage von Füzesabony, *Jahresschrift für mitteldeutsche Vorgeschichte* 73, 1990, 125–130.

Kovarnik 2003 – J. Kovarnik, Jungneolithische und bronzezeitliche Kreisgrabenanlagen in Mähren. In: H. Meiler (Hrsg.), *Festschrift Dietrich Mania*. Veröff. Landesamt Arch. Sachsen-Anhalt 57 (Halle /Saale, 2003, 325–336).

Kravciv 2019 – Št. Kravciv, *Mladoneolitické rondely na území strední Evropy*: Tvorba predikcních map výskytu rondelu / Disertacní práce. Hradec Králové: Filozofická fakulta, Univerzita Hradec Králové, 2019.

Lihardus, Vladar 1964 – J. Lihardus, J. Vladar, Zu Problemen der Ludanice – Gruppe in der Slowakei, *Slovenska archeologia* XII-1, 1964, 69–149.

Literski, Nebelsick 2012 – N. Literski, L. Nebelsick, Katalog der Kreisgrabenanalgen und vertwandten Tell der ersten Hälfte des 5. Jt. v. Chr. In Mittel-und Südosteuropa. In: *Neolithische Kreisgrabenanlagen in Europa – Neolithic Circular Enclosures in Europe*, Internationale Arbeitstagung in Goseck (2004). Tagungen des Landesmuzeums für Vorgeschechte Halle, Band 8, Halle, 2012, 433–532.

Meyer 2011 – M. Meyer, Die Nordperipherie – mittelneolithische Kreisgrabenanlagen in Brandenburg. In: *Tagungen des Landes Museum für Vorgeschichte*, Bd. 6, Halle 2011,

Meyer, Reatzel-Fabian 2006 – M. Meyer, D. Raetzel-Fabian, Neolitische Grabenwerke in Mitteleuropa, www.jugnstein-SITE.de, 15. Dezember 2006, 1–44.

Milo et al. 2015 – P. Milo/J. Zeman, M. Bartík, M. Kuca, Late Neolithic circular enclosures: never entirely uncovered. *Arch. Polona* 53, 1, 2015, 323–328.

Nemejcová-Pavúková 1986 – V. Nemejcová-Pavúková, Siedlung und Kreisgrabenanlagen der Lengyel – Kultur in Svodín (Südslowakei), In: *Symosium über die Lengyel – Kultur* (Nové Vozokany 1984), Nitra–Wien 1986, 177–183.

Neugebauer 1986 – J. W. Neugebauer, Erdgrossbauten der älteren Stufe der Lengyel – Kultur, *Internationales Symposium über die Lengyel – Kultur* (Nové Vozokany 1984), Nitra–Wien 1986,185–194.

Neustupný 2006 – E. Neustupný, Enclosures and fortifications in Central Europe, In: *Enclosing the Past: inside and outside in prehistory* (eds. A. Harding, S. Sievers, N. Venclová), Sheffield, 2006, 1–4.

Палавестра, Богдановић, Старовић 1993 – А. Палавестра, И. Богдановић, А. Старовић, Бодњик, Дружетић – енеолитско градинско насеље, *Гласник САД* 9, 1993, 186–191. (A. Palavestra, I. Bogdanović, A. Starović, Bodnjik, Družetić, Eneolitsko gradinsko naselje, *Glasnik SAD* 9, 1993, 186–191**)**.

Палавестра, Богдановић, Старовић 1996 – А. Палавестра, И. Богдановић, А. Старовић, Бодњик–Дружетић, Кампања 1994. *Гласник САД* 11, 1996, 190–197. (A. Palavestra, I. Bogdanović, A. Starović, Bodnjik–Družetić, Kampanja1994., *Glasnik SAD* 11, 1996, 190–197).

Pavúk 2000 – J. Pavúk, Das Epilengyel/Lengyel IV als Kulturhistorische Einheit, *Slovenska archeologia* XLVIII-1, 2000, 1–26.

Petrasch 1986 – J. Petrasch, Mittelneolitische Kreisgrabenanlagen in Südostbayern. Die Untersuchungen im Jahre 1984, *Internationales Symposium über die Lengyel – Kultur* (Nové Vozokany 1984), Nitra–Wien 1986, 227–234.

Petrasch 1990 – J. Petrasch, Mittelneolithische Kreisgrabenanlagen in Mitteleuropa, *Bericht der Römisch-Germanischen Kommision,* Band 71, 1990, Mainz am Rhein 1991, 407–564.

Plath 2011 – T. Plath, *Zur Problematik der Nutzungsinterpretation mittelneolithischer Kreisgrabenanlagen*, Dissertation, Univ. Hamburg, Hamburg 2011.

Podborský 1988 – V. Podborský, *Těšetice–Kyjovice 4* – Rondel osady lidu s moravskou malovanu keramikou, Brno 1988.

Podborský, Kovárnik 2006 – V. Podborský, J. Kovárnik, Neolithic and post-Neolithic enclosures in Moravia in their central European context. In: *Enclosing the Past: inside and outside in prehistory* (eds. A. Harding, S. Sievers, N. Venclová), Sheffield, 2006, 44–68.

Raczky 2019 – P. Raczky, Cross-Scale Settlement Morphologies and Social Formations in the Neolithic of the Grate Hungarian Plan. In: *Current Approaches to Tells in the Prehistoric Old World: A cross-cultural comparison from Early Neolithic to the Iron Age* (eds. A. Blanco-Gonzalesz, T. L. Kienlin), Oxford Books, 2019, 259–293.

Raczky, Anders 2008 – P. Raczky, A. Anders , Late Neolithic Spatial Differentiation at Polgár-Csoszhalom, Eastern Hungary. In: *Living Well Together? Settlement and Materiality in the Neolithic of South-East and Central Europe* (eds. D. Bailey, A. Whittle, and D. Hofmann), Oxbow Books, Oxford, 2008, 35–53.

Raczky, Anders 2012 – P. Raczky, A. Anders, Neolithic Enclosures in Eastern Hungary and Their Survival into the Copper Age. In: *Neolithische Kreisgrabenanlagen in Europa – Neolithic Circular Enclosures in Europe* (eds. F. Bertemes, P. F. Biehl, and H. Meller), Tagungen des Landesmuseums für Vorgeschichte Halle 8. Landesamt für Denkmalpflege und Archäologie Sachsen-Anhalt, Landesmuseum für Vorgeschichte, Halle/Saale 2012, 271–309.

Raczky, Anders, Bartosiewicz 2011 – P. Raczky, A. Anders, and L. Bartosiewicz The Enclosure System of Polgár-Csoszhalom and Its Interpretation. In: *Sozialarchäologische Per-*

spektiven: Gesellschaftlicher Wandel 5000–1500v. Chr. zwischen Atlantik und Kaukasus (eds. S. Hansen and J. Müller), Archäologie in Eurasien 24. Philipp von Zabern, Darmstadt 2011, 57–79.

Raczky, Sebok 2014 – P. Raczky, K. Sebok, The outset of Polgar-Czoszhalom tell and the archaeological context of a spacial central building, In Honorem Gheorghe Lazarovici (Timișoara 2014), Szeged 2014, 51–100.

Regenye 2020 – J. Regenye, Early Copper Age in western Hungary. The case of Lengyel culture's latest phase in Central Transdanubia. In: *Beiträge zur Kupherzeit am Rande der Südostalpen*, Rahden/Westf. 2020, 11–22.

Spatzier 2007 – A. Spatzier, Die Kreisgrabenanlage vom Henge Typ von Pömmelte-Zackmünde, Salzlandkreis, *Jahresschrift für Mitteldeutche Vorgeschichte*, Band 91/2007 (2009), 31–66.

Spatzier 2017 – A. Spatzier, Das endneolithisch-frühbronzezeitliche Rondell von Pömmelte-Zackmünde, *Salzlandkreis, und das Rondell-Phänomen des 4.–1. Jt. v. Chr. in Mitteleuropa*, Halle an der Saale 2017.

Stevanović 1998 – P. Stevanović, Upotrebna grnčarija sa eneolitskog lokaliteta Velimirovi Dvori – Ključ, *Petničke sveske* 48 (1998), Valjevo, 341–355.

Stojić, Cerović, 2011 – М. Стојић, М. Церовић, *Шабац, кулūурна сūраūиīрафија ūраисūоријских локалиūеūа у Подрињу,* Археолошки институт Београд и Народни Музеј Шабац, Београд 2011. (M. Stojić, M.Cerović, *Šabac, kulturna stratigrafija praistorijskih lokaliteta u Podrinju*, Arheološki institut Beograd i Narodni muzej Šabac, Beograd 2011).

Trnka 1986 – G. Trnka, Ergebnisse zu Untersuchungen der Kreisgrabenanlage von Kammeg, Niederösterreich, *Internationales Symposium über die Lengyel – Kultur* (Nové Vozokany 1984), Nitra–Wien 1986, 289–295.

Trnka 1991 – G. Trnka, *Studien zu mittelneolithischen Kreisgrabenanlagen*. Mitt. Prähist. Komm. Österr. Akad. Wiss. 26, Wien 1991.

Trnka 1994 – G. Trnka, Die mittelneolitischen Kreisgrabenanlagen in Österreich, *Internationales Symposium über die Lengyel – Kultur 1888–1988* (Znojmo–Kravsko–Tešetice 1988), Brno–Lódż, 1994, 231–240.

Trbuhović, Vasiljević 1972 – V. Trbuhović, M. Vasiljević, Rekognosciranje u Podrinju i sondažna istraživanja. *Arheološki pregled* 14, 164–189.

Трбуховић, Васиљевић 1975 – В. Трбуховић, М. Васиљевић, „Обровци" – посебан тип неолитских насеља у западној Србији, *Сūаринар* XXIV–XXV (1973/1974), Београд 1975, 157–161. (V. Trbuhović, M. Vasiljević, "Obrovci" – poseban tip neolitskih naselja u zapadnoj Srbiji, *Starinar* XXIV–XXV (1973/1974), Beograd 1975, 157–161.)

Трбуховић, Васиљевић 1983 – В. Трбуховић, М. Васиљевић, *Најсūарије земљорадничке кулūуре у Подрињу,* Народни Музеј Шабац, Шабац 1983. (V. Trbuhović, M.Vasiljević, *Najstarije zemljoradničke kulture u Podrinju*, Narodni Muzej Šabac, Šabac 1983).

Трипковић 2013 – Б. Трипковић, *Домаћинсūво и заједница. Kућне и насеобинске исūорије у касном неолиūуЦенūралноī Балкана*, Београд 2013. (B. Tripković, *Domaćinstvo i zajednica. Kućne i naseobinske istorije u kasnom neolitu Centralnog Balkana,* Beograd 2013.)

Tripković 2017 – B. Tripković, Nastanak lokaliteta tipa "Obrovac": Stratigrafsko vrednovanje stare hopoteze, *Archaica* 5 (2017), 66–78.

Трипковић 2020 – Б. Трипковић, *Велики свеū и мали свеūови, Сūрукūура и значење археолошких ūракси у Србији,* Филозофски факултет, Београд 2020. (B.Tripković*, Veliki svet i mali svetovi, Struktura i značenje arheoloških praksi u Srbiji,* Filozofski fakultet, Beograd 2020).

Трипковић, Церовић, Булић 2013 – Б. Трипковић, М. Церовић, Д. Булић, Културно наслеђе северозападне Србије: Локалитети типа Обровац – четрдесет година касније, *Резулūаūи нових археолошких исūраживања у северозаūадној Србији и суседним обласūима*, Српско археолошко друштво и Завод за заштиту споменика културе Ваљево, 2013, 45–56. (B. Tripković, M. Cerović, D. Bulić, Kulturno nasleđe severozapadne Srbije: Lokaliteti tipa Obrovac – četrideset godina kasnije, *Rezultati novih arheoloških istraživanja u severozapadnoj Srbiji i susednim oblastima,* Srpsko arheološko društvo i Zavod za zaštitu spomenika kulture Valjevo, 2013, 45–56.)

Трипковић et al. 2017 – Б. Трипковић, М. Церовић, Д. Филиповић, А. Трипковић, И. Живаљевић, Шанац–Изба код Липолиста, локалитет типа обровац: стратиграфија и релативна хронологија, *Гласник САД* 33 (2017), 47–71. (B. Tripković, M. Cerović, D. Filipović, A. Tripković, I. Živaljević, Šanac–Izba kod Lipolista, lokalitet tipa obrovac: stratigrafija i relativna hronologija*, Glasnik SAD* 33 (2017), 47–71).

Tripković, Penezić 2017 – B. Tripković, K. Penezić, On-site and off-site in Western Serbia: A geoarchaeological perspective of Obrovac type settlements, *Quaternary International* 429 (2017), 35–44.

Vasiljević 1967 – M. Vasiljević, Desić–Parlozi, Šabac – utvrđeno naselje s kraja neolita i početka bronzanog doba. *Arheološki pregled* 9, 1967, 21–22.

Vasiljević, Trbuhović 1972 – M. Vasiljević, V. Trbuhović, Rekognosciranje u Podrinju i sondažna iskopavanja, *Arheološki pregled1*4, 1972, 164–189.

Васиљевић, Трбуховић 1970 – М. Васиљевић, В. Трбуховић, Праисторија у *Шабац у ūрошлосūи* 1, Шабац, 37–62. (M. Vasiljević, V. Trbuhović, Praistorija u *Šabac u prošlosti* 1, Šabac 1970, 37–62).

Васиљевић, Поповић 2002 – М. Васиљевић, Д. Поповић, Подриње у старијем гвозденом добу, Шабац 2002, 7–36. (M. Vasiljević, D. Popović, Podrinje u starijem gvozdenom dobu, *Museum* 3, Šabac 2002, 7–36).

Zotović 1963 – M. Zotović, Kremenilo, Višesava, Bajna Bašta – višeslojno praistorijsko naselje, *Arheološki pregled* 5, 1963, 18–20.

Zotović 1985 – M. Zotović, *Arheološki i etnički problemi bronzanog i gvozdenog doba zapadne Srbije*, Beograd 1985.

Живановић 2013 – З. Живановић, *Енеолитска градина Бодњик.* Коцељева 2013. (Z. Živanović, *Eneolitska gradina Bodnjik*, Koceljeva 2013).

Резиме: МИЛОШ ЈЕВТИЋ, Филозофски факултет, Универзитет у Београду
МОМИР ЦЕРОВИЋ, Народни музеј Шабац

КРУЖНИ ЗЕМЉАНИ ОБЈЕКАТ ИЗ РАНОГ БАКАРНОГ ДОБА У СЕВЕРОЗАПАДНОЈ СРБИЈИ
Локалитет Шанчина у Десићу код Шапца (истраживања 2017–2019)

Кључне речи. – кружне ограде, касни неолит, старије бакарно доба, винчанска култура, лењелска култура, луданичка група, планина Цер, земљани бедем, палисада, ров, дубоко окно/бунар

Највећи део рада посвећен је валоризацији прикупљене археолошке грађе са нових археолошких истраживања праисторијског налазишту Шанчина у селу Десић, код Шапца (2017–2019). Локалитет се налази на последњим, северним обронцима планине Цер, у шумовитом потесу Парлози, на граници атара села Десић и Радовашница, на око 300 m удаљености од праисторијског насеља градинског типа. Ради се о правилном кружном утврђењу, са изузетно добро очуваним земљаним бедемом пречника 25 m, подигнутом по ободу мањег купастог узвишења. Систему земљане утврде, осим унутрашњег бедема припада дубоки шанац са заравњеним дном и спољни земљани бедем, потковичасте основе. У оквиру систематског рекогносцирања праисторијских налазишта на простору Мачве и Поцерине, првенствено винчанских насеља градинског типа, 1967. године организују се на лок. Шанчина скромни сондажни радови, који нису допринели његовом временском и културном опредељењу. Нова археолошка истраживања била су усмерена на унутрашњи простор објекта, омеђен високим земљаним бедемом, прстенастог облика. Стратиграфска слика у истраженим сондама (укупне површине 152 m²), указује на катастрофалан пожар, што је свакако био узрок трајног напуштања објекта. Сонде које су тангирале горњу нивелету земљаног насипа пружиле су податке о постојању кружног палисадног рова, пречника 21,5 m, откривеним непосредно уз унутрашњу ивицу широко развучене круне бедема. Положај дрвене палисаде указује да је у првој етапи земљаних радова најпре одређен центар кружног утврђења, а затим ископан палисадни ров и вертикално пободени, густо збијени, један до другог, масивни диреци. Дрвена палисада била је део прстенастог земљаног утврђења, у својству подзида или подграђа са унутрашње стране кружног објекта. Најинтензивнији трагови катастрофалног пожара откривени су непосредно изнад палисадног рова, у слоју са великом количином препеченог лепа. Унутар бедема нису откривени трагови компактног културног слоја, као ни елементи неког трајног објекта. Постоје археолошки трагови који припадају остацима мањих, краткотрајних ватришта. Неколико дубоких јама, мањих димензија и левкастих облика, могу се на основу садржаја протумачити као основе за подизање усамљених, вертикалних дирека (можда концентрично организованих). У средишњем делу кружног земљаног утврђења откривена је дубока јама/бунар, истражена до нивоа подземних вода, на релативној дубини од 6,30 m. Тешко је рационално објаснити копање бунара у средишњем делу земљаног утврђења, уколико се неколико планинских водотокова и извор питке воде налазе у непосредној близини земљаног утврђења и суседног градинског насеља. Претпостављамо да је бунар коришћен у култне сврхе, иако у испуни дубоке јаме нема јасних трагова жртвених дарова. Према бројним уломцима секундарно горелих керамичких посуда, кружно утврђење у Десићу припада поствинчанској култури раног енеолита.

Развој култура раног бакарног доба на простору западне Србије приказан је у сажетом облику, издвајањем свега неколико насеља градинског типа и налазима бакарних секира са отвором за држаље. Посебна пажња је усмерена на несигурно документоване мање кружне објекте типа Обровац, сличне конструкције као рондела у Десићу. У завршном делу рада дат је кратак приказ кружних земљаних структура са ширег простора централне Европе, познатих под називом *неолитске ронделе*. Често се за овај облик кружно ограђених простора користи немачки термин *Kreisgrabenanlagen*. Археолошка истраживања у земљама средње Европе у последњих неколико деценија увећала су број тзв. праисторијских рондела. Загонетне кружне, земљане структуре, ограђене рововима, дрвеним палисадама и ређе земљаним бедемима, припадају најчешће културама средњег и млађег неолита на тлу централне Европе. Ронделе мањих или већих димензија посебно су бројне унутар пространог лењелског културног комплекса, у западном делу карпатске котлине. Према облику и основним елементима архитектуре, закључено је да земљано утврђење у Десићу припада посебном облику мањих налазишта оивичених широким ровом, у појединим елементима слично палисадним кружним структурама из раног бакарног доба у североисточним и централним деловима Велике мађарске низије. Кружни земљани објекат из Десића на основу покретних археолошких налаза, у првом реду керамичког материјала, може се оквирно датирати у крај V миленијума пре н. е.

UDC: 903.5"637"(497.11)
https://doi.org/10.2298/STA2272045K
Original research article

ALEKSANDAR KAPURAN, Institute of Archaeology, Belgrade
MARIO GAVRANOVIĆ, Austrian Archaeological Institute, Vienna
IGOR JOVANOVIĆ, Museum of Mining and Metallurgy, Bor

BRONZE AGE BURIALS WITHIN THE MORAVA, NIŠAVA AND TIMOK BASINS

e-mail: a.kapuran@gmail.com

Abstract. – Following more than seven decades of research on the Bronze Age cremation burial grounds in the territory of Serbia, the new absolute dates provide us with an opportunity to determine a more precise chronological sequence of different local cultural manifestations. Although the pioneers of the Serbian archaeology after WWII defined the main cultural trajectories that led to the establishment of cremation as the main burial rite during the 2nd millennium BC, several misconceptions were established that need to be corrected, considering new data. We regard this paper as our contribution to the better understanding of the cultural and chronological sequence in the Central Balkans during the Bronze Age.

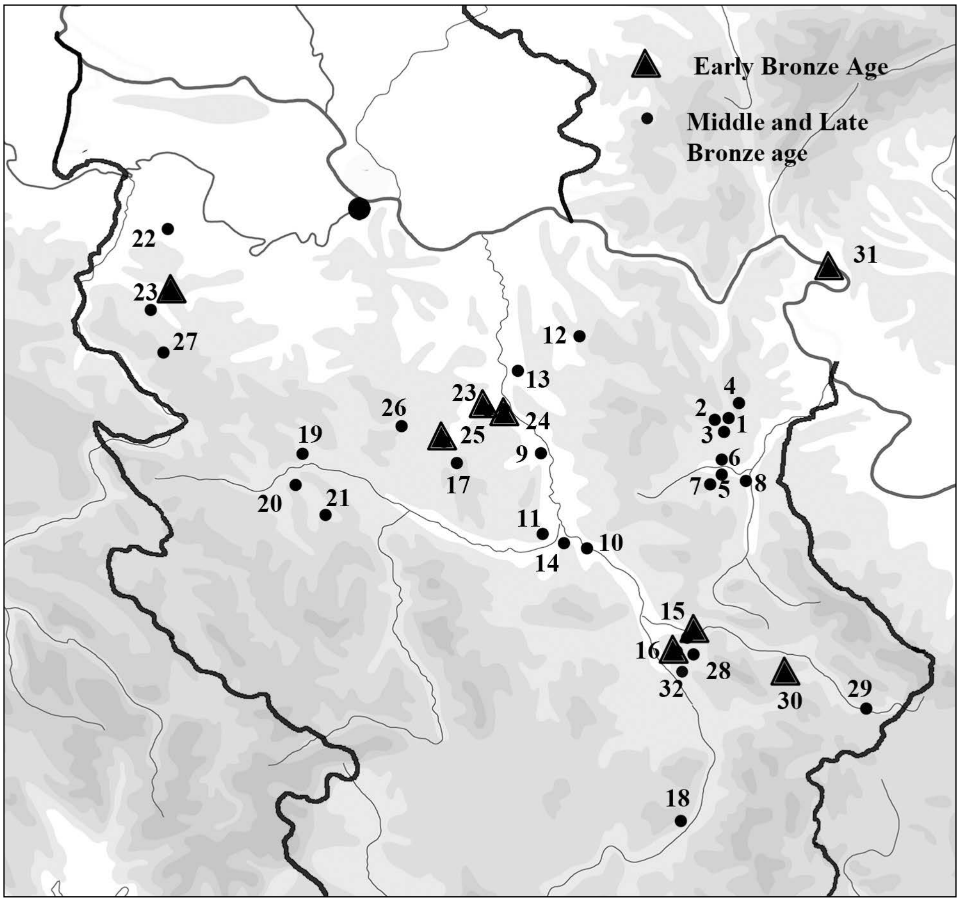
Key words. – Central Balkans, Bronze Age, burials, cremation, burial rite, urns, absolute dates

The basins of the Morava, Timok, and Nišava rivers are located in the central part of the Balkan Peninsula.[1] The area is bordered to the north by the Carpathian Massif and the Pannonian Plain, to the west by the West Morava river, to the east by the Wallachian Plain, and finally, to the south by the Nišava region and Stara Planina (Map 1).

Following WWII, D. and M. Garašanin started the first investigations on the Bronze Age cremation burial sites in central Serbia at sites such as Dobrača near Kragujevac,[2] Belotić and Bela Crkva,[3] and Gloždak near Paraćin.[4] The discovery of further sites within the Morava Basin and its tributaries, such as Rutevac,[5] Đurinac and Dvorište near Despotovac[6] and Maćija near Ražanj,[7] led to the definition of the Paraćin group of the Bronze Age.[8] The main characteristics of this distinct cultural phenomenon are the practice of exclusive cremation, ceramic urns and the occasional use of stone circular constructions in burial architecture. Urn cemeteries with similar finds and circular stone constructions were also later uncovered at the sites of Rajkinac near Jagodina[9] and Mađilka near Pirot.[10] Due to the limited scope of the excavations, delayed publications and inadequate storage of anthropological remains, our knowledge about the Paraćin group remained restricted. The basic chronological division in the phases Paraćin I and Paraćin II, as proposed by M. Garašanin, draws upon the ceramic typology according to which graves with channelled vessels represent the younger stage, with an assumed range between the 15th and 13th century BC.[11] It is worth pointing out that in one of the early studies of D. Garašanin she

1 Cvijić 1991, 199.
2 Garašanin, Garašanin 1950; Garašanin 1958.
3 Garašanin, Garašanin 1958.
4 Garašanin 1958a; Garašanin 1983.
5 Todorović, Simović 1959.
6 Trbuhović 1961.
7 Tasić 1965.
8 Garašanin 1983; Peković 2007.
9 Stojić 1980.
10 Jevtić 1990.
11 Garašanin 1983.

Manuscript received 3th March 2022, accepted 27th October 2022



1. Trnjane
2. Borsko jezero
3. Hajdučka česma
4. Kriveljski kamen
5. Magura
6. Zvezdan
7. Felix Romuliana
8. Pišura česma
9. Gloždar
10. Rutevac
11. Obrež
12. Djurinac
13. Rajkinac
14. Stalać-Grad
15. Velika Humska čuka
16. Bubanj
17. Ljuljaci
18. Meanište
19. Ostra
20. Mojsinje
21. Lučani
22. Belotić
23. Bela crkva
24. Vecina mala
25. Blagotin
26. Dobrača
27. Paulje
28. Medoševac
29. Madjilka
30. Glogovac
31. Vajuga
32. Medoševac

Map 1. Early and Middle Bronze Age burials in the Morava, Timok and Nišava Basens

Карта 1. Гробови раної и средњеї бронзаної доба у сливовима Мораве, Тимока и Нишаве

stressed that the emergence of urn cemeteries of the Paraćin group precedes the beginning of the Urnfield culture in central Europe and is, therefore, not directly connected with this Pan-European phenomenon.[12]

In the territory downstream of the Danube river near Đerdap, within the Ključ region ("Konjska glava"), a series of discoveries of burial grounds with urn graves were made in the late 1950s and the early 1960s. Before that, M. Vasić published the finds from the site of Kličevac, also situated on the Danube bank, with an urn cemetery of the Middle Bronze Age.[13] The banks of the Danube also host some other sites, including Glamija, near Korbovo[14] with pottery indicative of the Žuto Brdo–Gárla Mare group as the most eastern branch of a large complex of Transdanubian encrusted pottery.[15] Urn graves with incrusted pottery were also discovered at the site of Pesak, near Korbovo.[16] During the excavations of the Roman fortification of Taliata, further urn graves with incrusted pottery of the Žuto Brdo–Gárla Mare group as well as urn graves with channelled pottery assigned to a subsequent cultural complex known as Gáva–Belegiš II, were recorded.[17] Rescue excavations in the 1980s resulted in the discovery of the sites of Konopište (known as Mala Vrbica–Livade in the literature) with both Žuto Brdo–Gárla Mare and Gava–Belegiš II urn graves,[18] Vajuga–Selište (urn cemetery) and Vajuga–Pesak (inhumation graves from the Early Iron Age.[19]

---

[12] Garašanin 1958b.
[13] Vasić 1953.
[14] Krstić 1983; Krstić 2003.
[15] Şandor-Chicideanu 2003; Reich 2006; Kiss 2012.
[16] Cermanović 1960; Letica 1975; Radojčić 1986.
[17] Bulatović et al. 2013, 82.
[18] Vukmanović 1983; Popović 1998; Đorđević 2019.
[19] Premk et al. 1984; Popović, Vukmanović 1998.

The first discoveries of Bronze Age urn cemeteries within the Timok Basin in north-eastern Serbia occurred a few decades later. Apart from scarce data on urns, which were brought to the National Museum in Zaječar from the sites of Pišura Česma in Zaječar and Zvezdan–Tekstilni kombinat, the first archaeologically documented cremation graves were found in 1984 in the proximity of building "E" of the Felix Romuliana Imperial Palace.[20] Between 1986 and 1988, B. Jovanović and I. Janković investigated the urn cemetery at Trnjane, located 8 km west of the city of Bor.[21] Further urn cemeteries in Magura near Felix Romuliana,[22] Borsko Jezero and Hajdučka česma came to light in the 1990s.[23] The beginning of the 21st century was marked by new research at the Borsko Jezero site, the discovery of the Kriveljski Kamen–Bunar cemetery[24] and the onset of the systematic investigation of the Hajdučka Česma cemetery.[25] The main characteristic of the urn cemeteries in north-eastern Serbia near the city of Bor, is the regular presence of stone circular constructions around the urns, as well as a paucity of grave goods, with only sporadic metal objects or smaller vessels occurring in urns or within the stone constructions. Regarding the regional and cultural classification, the urn necropolises in north-eastern Serbia were considered a regional subgroup of the Paraćin group[26] or as a distinct cultural manifestation called the *Gamzigradska group,* according to D. Srejović and M. Lazić.[27] Since no absolute dates were available for any of these sites, B. Jovanović estimated a Late Bronze Age dating, or more precisely a period between the 14th and the 11th century BC, assuming a relationship to the European Urnenfelder culture.[28]

Several decades after a series of discoveries made by D. and M. Garašanin and the premature death of D. Srejović, B. Jovanović and R. Vasić were among the few researchers that thoroughly dealt with Bronze Age burial practices in eastern/north-eastern and Central Serbia.[29] Based on the analyses of pottery and burial practices, they outlined several regional groups including the Brnjica group in southern Serbia and North Macedonia, the Paraćin group with two regional subgroups (Morava and Timok subgroups), and the Belegiš group in northern Serbia and Vojvodina. In terms of dating, all of these regional groups were, until recently, associated with the Middle and Late Bronze Age, or the period between the 15th and 11th century BC.[30] However, the new absolute dates from north-eastern Serbia have unmistakably demonstrated, at least for this specific region, a much higher age with most of the urn graves falling into the period between the 20th and 18th century BC.[31]

In this paper, we will first present absolute dates from some of the sites in Central Serbia assigned to the Paraćin group and discuss their relationship with the neighbouring groups. We will also provide an overview of the tradition of the cremation burial rite in the Central Balkans and undertake a closer analysis of typical pottery of the Bronze Age regional groups that practiced cremation and deposition of cremated remains in urns.

Burial rite

In general, burial rituals represent one of the most intimate and sensitive processes within a human community and are, therefore, least susceptible to changes. Based on archaeological facts, it is not easy to determine the period in which cremations became the exclusive burial rite in the territories of the Central Balkans. Among the earliest evidence are the graves at the site of Padina, upstream of Lepenski Vir, with one of them having a bowl typical of the Copper Age Kostolac culture as an urn.[32] Given erosion and alluvial sediments severely disturbed most of the graves, it was not clear if the uncovered stone rings near the urns actually belonged to the burial architecture. However, as represented by a grave from Gomolava near Hrtkovci in the region of Srem, communities of the Kostolac group also practiced inhumations.[33] Of note is also an inhumation grave with three individuals from the site of Glogovac near Bela Palnaka in the Nišava Valley, with an absolute date pointing to the beginning of the 3rd millennium BC and, thus, corresponding to

[20] Srejović, Lazić 1997, 229.

[21] Jovanović, Janković 1990; Jovanović, Janković 1996; Jovanović 1999; Kapuran et al. 2020.

[22] Srejović, Lazić 1997, 228; Lazić 2010; Lazić 2016.

[23] Lazić 2004; Kapuran, Miladinović-Radmilović 2011.

[24] Kapuran et al. 2013.

[25] Gavranović et al. 2022.

[26] Jovanović 1999.

[27] Srejović, Lazić 1997.

[28] Jovanović 1999, 71.

[29] Jovanović 1999; Vasić 2013.

[30] Vasić 2013.

[31] Kapuran et al. 2020, 52–53; Mehofer et al. 2021; Gavranović et al. 2022.

[32] Jovanović 1976, 132.

[33] Jovanović 1976, 132; Petrović 1984, Fig. 28.

the final stages of the Kostolac culture.[34] Regarding a broader geographical context, a cremation grave assigned to the Kostolac group was also discovered at the site of Dvorovi in neighbouring north-eastern Bosnia.[35] In the same region, two further urn burials from the Copper Age (Kostolac and Baden cultures) with absolute dates indicating the 28th and 26th century BC, became known at the site Novo Selo, near Bijeljina.[36] With the current level of research, it can be concluded that within the cultural complex described as the Kostolac culture, both inhumation and cremation were practiced.

Following the Early Bronze Age, the site of Verbicioara in Oltenia (a close neighbouring region northeast of Serbia) also represents a good example of a bi-ritual burial site with inhumation and cremations in urns.[37] Grave goods from the skeletal graves included bronze *Noppenrings* and a pin of the Cyprian type, dated to the Br A period.[38] On the other hand, C. Schuster considers that during the Bronze Age, skeletal burials prevailed in Muntenia, while incineration was common for the territory of Oltenia.[39]

It is indicative and highly interesting that one of the earliest cemeteries with exclusive cremations was unearthed in the territory of southern Serbia at the site of Ranutovac, near Vranje.[40] The excavations revealed two clusters of graves with several interconnected circular stone structures. The remains of one or several cremated individuals were placed in the centre of the stone structures, and after that were covered with ceramic vessels.[41] According to the absolute dates, the cemetery in Ranutovac falls in the time frame between the 22nd and the 19th century BC, making it one of the earliest Bronze Age cremation cemeteries in the Central Balkans.[42] In this context, it is noteworthy that in the same region of southern Serbia, inhumation seemed to be a prevailing rite in the preceding Late Copper Age, as demonstrated by the mentioned grave find from Glogovac in the Nišava Valley. Hence at the current level of research, it appears valid to presume that the adoption of cremation as a burial rite started by the end of 3rd millennium BC; first among communities in southern Serbia.[43] The establishment and diffusion of certain cultural traits that would, in subsequent periods, occur further to the north, would follow thereafter.

The substantial changes that occurred in the Central Balkans by the end of the 3rd millennium can also be traced in a contrasting picture when it comes to the density of archaeological sites from the Late Copper and Early Bronze Ages. For instance, within the area between the Sava, Danube, and Great Morava rivers, there are a total of 14 sites attributed to the Late Copper Age (Kostolac group),[44] while for the Early Bronze Age, only sites at Ostrikovac, Vecina Mala, and Blagotin are known thus far.[45] Even more extreme is the example of north-eastern Serbia (Timok Basin), with 80 registered locations attributed to the Kostolac or regional Coţofeni–Kostolac groups, and practically no sites from the start of the Early Bronze Age.[46] In western Serbia, within the Jadar and Pocerina regions, there is also an obvious disparity between the total of 17 Late Copper Age sites and only 4 Early Bronze Age sites, even with the addition of two settlements and one necropolis from the start of the Middle Bronze Age (Ostra, Gornja Gorevnica, and Lučani–Kruševlje).[47] In short, after the Late Copper Age there is a significant decrease of sites in the whole area of the Central Balkans, which indicates a noticeable reduction of population in the second half of the 3rd millennium BC (Map 1).

Currently, the transition between the Late Copper Age and Early Bronze Age is best documented in the tell sites of Bubanj and Velika Humska Čuka, near Niš, with a long-lasting occupation activity from the Early Copper Age until the Late Bronze Age.[48] A characteristic for the end of the 3rd and the beginning of the 2nd millennium BC is the emergence of a pottery style named Bubanj–Hum IV (after a hiatus in the second half of the 3rd millennium following the previous Bubanj–Hum phase). The fact that the pottery of the Bubanj–Hum IV stage also appears in regions further to the north, between the Danube, the Morava and the Timok Basins, points at an intensification of contacts between the local communities.[49] It is not to be excluded that

---

[34] Lazić, Ljuština 2017, 130; Bulatović et al. 2020, 1171.
[35] Kosorić 1965.
[36] Gavranović et al. 2020, 55.
[37] Crăcuinescu 2004, 72.
[38] Berciu 1961, 146, Abb. 16; Vasić 2003, 13.
[39] Schuster 2003, 132.
[40] Bulatović 2020.
[41] Bulatović 2020, Fig. 2.1; Fig. 2.2; Fig. 2.32.
[42] Bulatović 2020, 95.
[43] Bulatović 2020; Cavazutti et al. 2022.
[44] Nikolić 2000, 9–38.
[45] Stojić 1986; Nikolić, Kapuran 2003.
[46] Kapuran, Bulatović 2012, Map. 1.
[47] Bulatović 2021, Fig. 1.
[48] Bulatović, Milanović 2020.
[49] Bulatović 2021, 142–143.

some of these contacts also mirror the movement of specific population groups and occupation of some regions, following the pause after the Late Copper Age. In the case of the Timok Basin, with more than convincing signs of an abandonment after the Late Copper Age, one of the reasons for the possible renewed occupation was the abundance of copper ore sources that became even more attractive with the increasing demand for copper raw material for the growing bronze metallurgy.[50]

North-eastern Serbia – urn cemeteries

Almost three decades after the last excavations by B. Jovanović at the site of Trnjane, the renewed cooperation between the Museum of Mining and Metallurgy in Bor and the Institute of Archaeology in Belgrade, brought a new research initiative to the Bor region. In the meantime, the research of the Borsko Jezero necropolis was finished in 2002, but the results have still not been sufficiently published.[51] The new impetus for the research started in 2017 within the framework of cooperation between the OREA Institute for Oriental and European Archaeology (now the Austrian Archaeological Institute of the Austrian Academy of Sciences), and the research projects; *Visualizing the Unknown Balkans* and *New insight in Bronze Age metal producing societies in the Western and Central Balkans*.[52]

Based on the recently obtained absolute dates, all of the urn cemeteries in the vicinity of Bor, including Trnjane, Borsko Jezero, Kriveljski Kamen–Bunar, and Hajdučka Česma,[53] belong to the earliest stages of the Middle Bronze Age or the period between the 20th and 18th century BC.[54] Of the same age, are also the associated settlement sites with traces of copper ore processing and metal production in Trnjane (immediately to the west of the cemetery), Ružana and Čoka Njica.[55] Based on the chronological terminology for the Central Balkans, the sites in the region of Bor are connected with the stage of the Bubanj–Hum IVa – Ljuljaci.[56] Supportive of the dating into the beginning of the Middle Bronze Age is also an occurrence of a specific shape of two-handled beakers with trapezoidal extensions on the rim, in the Timok Basin.[57] As demonstrated in the comprehensive studies about the typology, dating and distribution of two-handed beakers, the finds with a trapezoidal extension on the rim are indicative of the early Middle Bronze Age (Bubanj–Hum IV) with northern Greece and North Macedonia as the most probable areas where this type emerged and then gradually spread to the north.[58] On the other hand, beakers with button-shaped extensions on the handles appear to be more linked with an area north of the Danube or the Vatin culture.[59] The finds of beakers with button-shaped extensions from the settlement site of Ljuljaci, near Kragujevac are an obvious example that certain cultural influences from Southern Pannonia also reached the area of the Central Balkans at the beginning of the Middle Bronze Age.[60] A two-handled beaker with proto-Vatin characteristics, dated to the Early Bronze Age was also found at the Kruševlje site in Lučani, in western Serbia.[61]

Prior to the new research results, the urn cemeteries in north-eastern Serbia near the city of Bor were described as a phenomenon that is associated to the Paraćin group, or more precisely to the regional Timok group.[62] B. Jovanović came to this conclusion by analysing the pottery from a stylistic and typological point of view and by a comparison of burial practices. With a deeper insight into the ceramic inventory of urn cemeteries near Bor and with a significant amount of the new absolute data, we believe that this opinion needs modification and that new narratives should be created.

---

[50] Mehofer et al. 2021.

[51] Lazić 2004, 109; Kapuran, Miladinović-Radmilović 2011.

[52] Thanks to the cooperation as well as the professional, logistical, and financial help of the Austrian Archaeological Institute, we have acquired important data through geophysical prospection (geomagnetic measurements and LIDAR scans), physical and chemical analyses of metal slags, and radiocarbon absolute dates. The project "*Visualing the unkownn Balkans*" was supported by the Innovation Fund "Research, Science and Society" of the Austrian Academy of Sciences (PI: B. Horejs and M. Gavranović). The project "*New insight in Bronze Age metal producing societies in the western and central Balkans*" was supported by the Austrian Science Fund (FWF) P 32095 (PI: M. Gavranović).

[53] It is highly possible that an urn cemetery also existed at the site of Šoka Lu Patran. Fragments of urns and burnt human remains were found within the depot of the Museum of Mining and Metallurgy in Bor by I. Jovanović. No additional data on the research, such as diaries, inventories, or technical documentation is available. Based on information from the estate owner, I. Jovanović managed to reconstruct the location of the site in the vicinity of Zlot Cave.

[54] Kapuran et al. 2020; Gavranović et al. 2022.

[55] Kapuran et al. 2020; Mehofer et al. 2021.

[56] Bulatović et al. 2020, 1178–1179.

[57] Bulatović, Stankovski 2012, 321; Bulatović 2021, 141.

[58] Bulatović, Stankovski 2012, 321.

[59] Bulatović 2021, 141.

[60] Bulatović 2021, 140.

[61] Ikodinović 1968; Dmitrović 2016, 149.

[62] Jovanović, Janković 1996; Jovanović 1999.

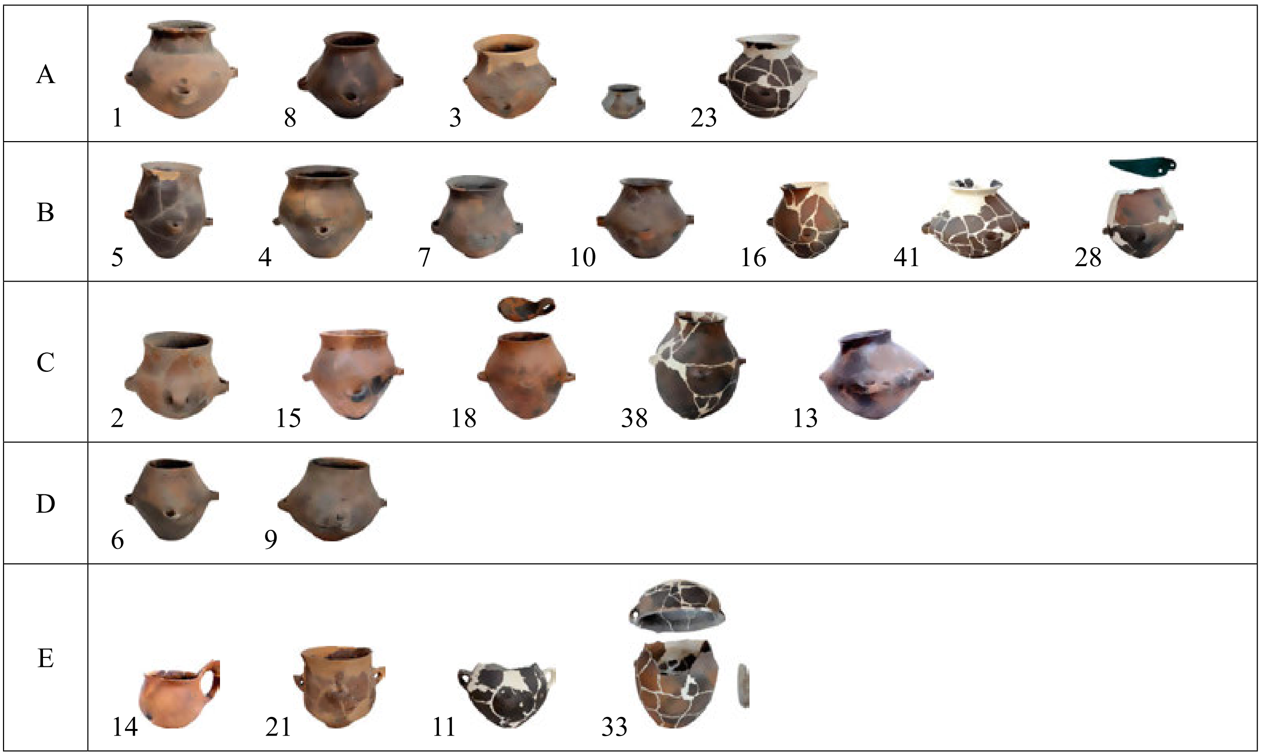


Fig. 1. Ceramic types from Trnjane (after: Jovanović, Janković 1996

Сл. 1. Керамички шийови на Трњанима (йрема: Jovanović, Janković 1996)

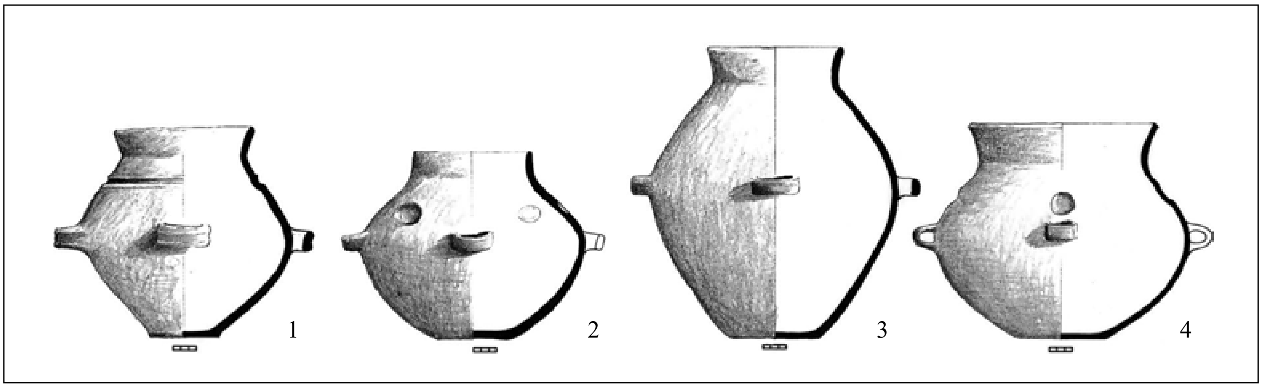


Fig. 2. Kriveljski Kamen–Bunar necropolis

Сл. 2. Некройола Кривељски Камен–Бунар

Namely, based on forms and decoration, B. Jovanović separated ceramics from Trnjane into 5 groups (A–E).[63] We consider that such a classification is unnecessarily elaborated with details, since biconical urns are clearly the dominant form (groups B, C, and D), and the differences are observed in the degree to which the neck of the vessel is emphasised. The common characteristics of all urns from Trnjane are one or two pairs of horizontal handles. The third group of vessels, defined as group E, are somewhat atypical as they expose some elements typical of the Vatin pottery.[64] Save for finger impressions above horizontal handles

[63] Jovanović, Janković 1996, 187–188.

[64] Jovanović. Janković 1996, 188, 193, Abb. 9.

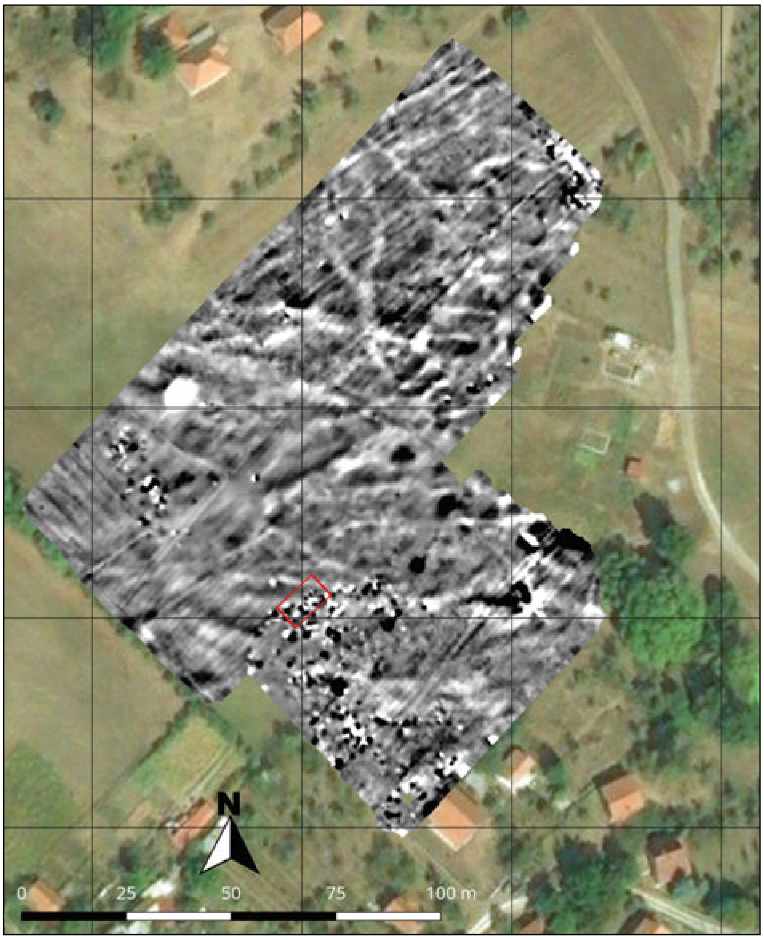


Fig. 3. Hajdučka česma necropolis

Сл. 3. Некропола Хајдучка чесма

on several urns, the pottery of group E is characterised by triangular extensions on the rim, as is the case with a bowl that covered one of the pear-shaped urns (Fig. 1/33).[65] A similar "S" profiled vessel of an inverted bell shape, with a horizontal and vertical knee-shaped handle was also attributed to group E (Fig. 1/21).[66] It should be mentioned that except for the triangular extensions on the rim, only decorations comprised of pitted finger impressions are present among finds from Trnjane (Fig. 1/1).

Out of four urns discovered within the characteristic circular stone structures at the Kriveljski Kamen–Bunar site, two are biconical with an emphasised neck and horizontal handles (Fig. 2).[67] The decorations are horizontally burnished channels, (Fig. 2/1) and pitted finger impressions (Fig. 2/2.4).

The first urns at the site of Hajdučka Česma, located 2 km west of Brestovačka Banja and just 1.5 km from the site of Trnjane, came to light in 1992 during small-scale rescue excavations, yet no documentation exists (Fig. 3, Fig. 4/1–2).[68] Systematic archaeological excavations at Hajdučka Česma in 2018 and 2019 yielded a total of 14 graves with circular stone constructions, however, the geophysical prospection suggests the existence of a large cemetery with around 100 circular stone constructions. The uncovered urns from Hajdučka česma have, thus far, shown a larger variety of forms and decorations, especially when compared to other nearby urn cemeteries. For instance, the urn with a lid (a bowl with a triangular and rectangular extension on the rim) from Grave 1 (Fig. 4/6) has a pear-shaped form and modelled triangles with pitted impressions positioned above horizontal handles. The closest parallels for that type of decoration are known from the site of Pančevo–Donja Varoš (Vatrogasni Dom), dated to the Early Bronze Age, or

65 Jovanović, Janković 1999, Abb. 9/1.

66 Jovanović, Janković 1999, Abb. 9/1.

67 Kapuran et al. 2013, T. 1.

68 Srejović, Lazić 1997, 227; Kapuran et al. 2014, 216–217.

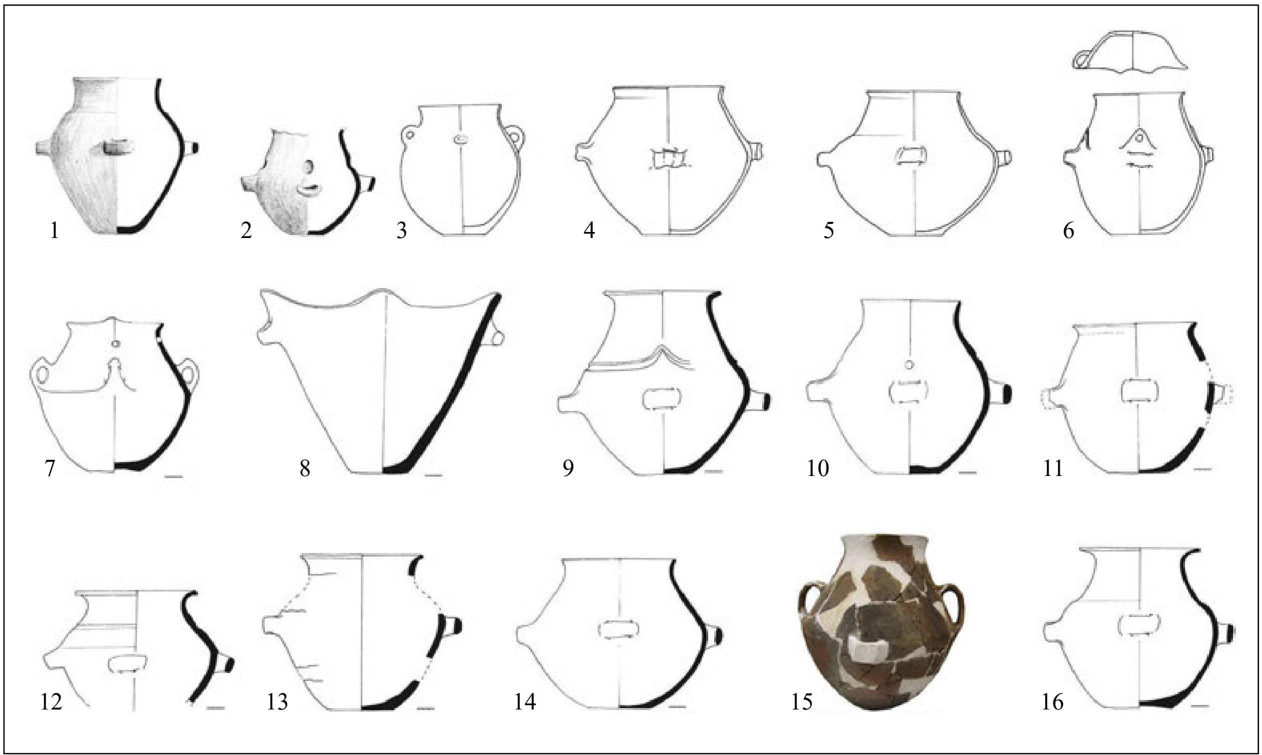


Fig. 4. Urns from the Hajdučka Česma necropolis

Сл. 4. Урне са некройоле Хајдучка чесма

the Proto-Vatin.[69] In addition, a belly-shaped urn from Grave 4, with two tongue-shaped protomes placed above a pair of vertical handles was found (Fig. 4/3). Such vessels have numerous analogies in Ljuljaci,[70] Lazarev Grad,[71] Ostrikovac II,[72] Bosut–Gradina,[73] Vinča,[74] Feudvar,[75] and Židovar.[76] Two biconical urns, each with a pronounced neck and rim, from two graves at Hajdučka Česma, also have a burnished horizontal channel above the handles (Fig. 4/12, 9). A unique example of decoration is represented by a channel in the form of the letter A on an urn from Grave 7 (Fig. 4/9), which relates to the previously mentioned decoration on the urn from Grave 1 (Fig. 4/6). The sharply biconical urn from Grave 5 has vertically positioned handles and a rim decorated with a triangular extension (Fig. 4/7). The most similar example is the urn from Grave 13, with a clear biconical form, elongated neck, and a pair of vertical and horizontal handles (Fig. 4/15). A unique urn form within the Timok Basin is a vessel from the destroyed Grave 6, for which we presume secondary use for a burial. The rim abrasion especially indicates the secondary treatment of the vessel. However, there is also a possibility that the urn represented the lower cone of a larger pot (Fig. 4/8). The urn from Grave 8 also had a decoration with impressions above the handle (Fig. 4/10). The grave goods from Hajdučka Česma included spindle whorls (found both in the urn and/or within the circular stone constructions), small ladle-shaped lamps and, in one case, a corroded bronze sewing pin. Numerous fragments of two-handled beakers and smaller cups were found between the circular stone constructions.

The necropolis at Borsko Jezero was sinc in the early 1960s, as a result of the construction of a dam for the reservoir on the confluence of Valja Žon creek and Marcelova River, 12 km west of the city of Bor.[77]

[69] Rašajski, Gačić 1985, 15; Grčki-Stanimirov 1996, 76.

[70] Bogdanović 1986, 44, Fig. 58.

[71] Stojić, Čađenović 2006, Fig. 27.

[72] Stojić 1989, 181, Fig. 16.

[73] Popović, Radojčić 1996, 25/32.

[74] Tasić 1984, T. 14/9.

[75] Hansel, Medović 1991, T. 9/1.

[76] Lazić 1997, Fig. 23.

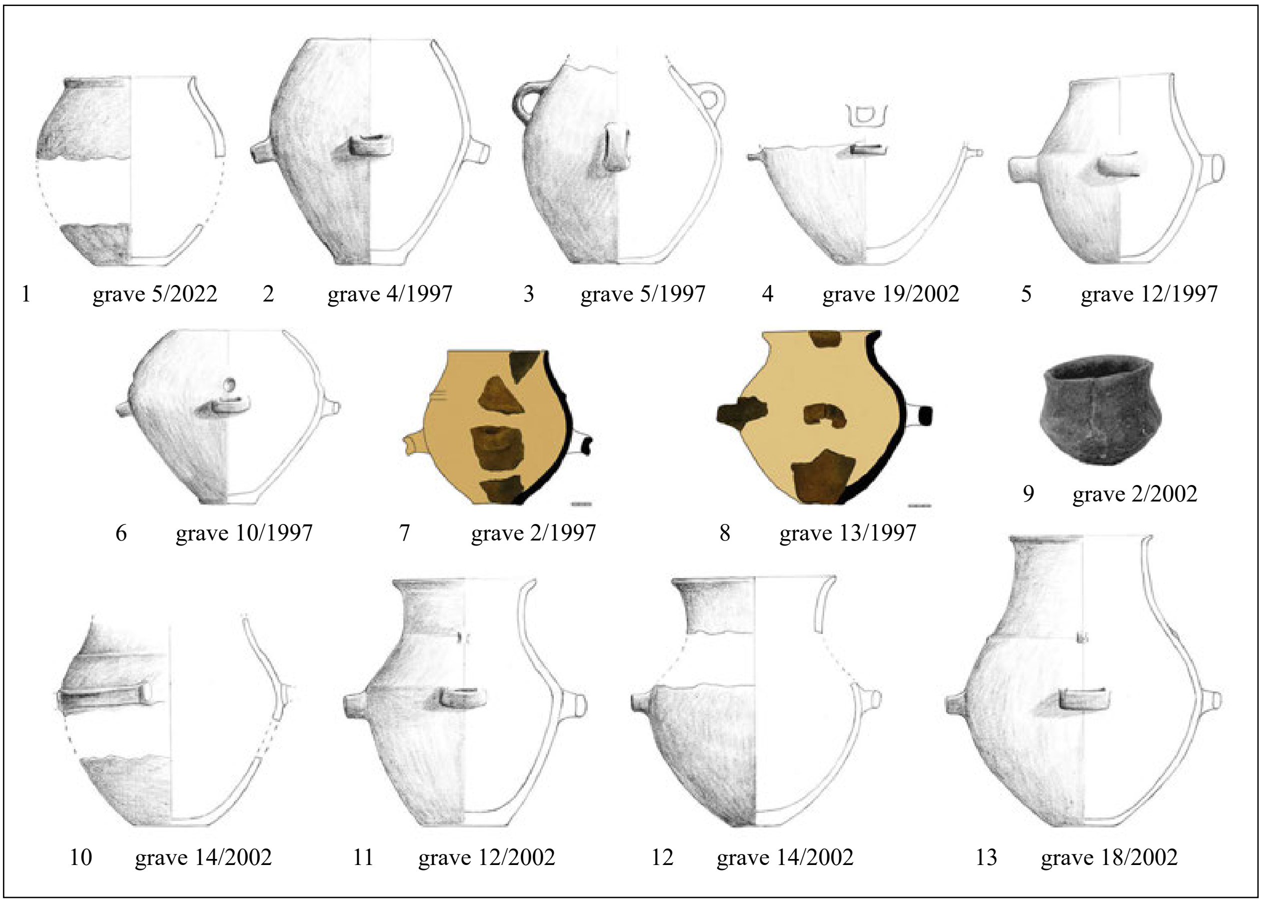


Fig. 5. Urns from the Borsko Jezero necropolis

Сл. 5. Урне са некройоле на Борском језеру

A high degree of water oscillations destroyed a substantial number of stone structures, especially those positioned on the higher location of a tongue-shaped ridge above the confluence.[78] The excavations took place in 1997 and 2002.[79] In most of the graves, only the lower parts of the urns remained intact. The reconstructed urns corresponded well to the existing repertoire from other adjacent cemeteries. The characteristic decoration of biconical urns with elongated necks are miniature, vertically positioned protomes between the shoulder and the neck of the vessel, like in the case of graves 12/2002 and 18/2002 (Fig. 5/11,13). The belly-shaped urn from Grave 2/1997 was decorated with a modelled horizontal band on the rim (Fig. 5/10), and the urn from Grave 10/1997 has pitted impressions above horizontal handles (Fig. 5/6). The urn with the oval belly shape and everted rim from Grave 10/1997 is the only one with a combination of two horizontal and two vertical handles (Fig. 5/3).

The second group of Bronze Age sites in northeastern Serbia is situated near the city of Zaječar. The cemetery on the Magura hill, 10 km west of Zaječar, is positioned on the right bank of the Crni Timok, next to the Felix Romuliana Imperial Palace. The cemetery covers an area of 1,650 m²,[80] with a total of 82 graves excavated between 1989 and 1996. With the exception of two urns, all the urns were deposited within the circular stone constructions, comparable to the cemeteries in the Bor area. At the beginning of the 4th century AD, the Roman emperor Galerius (305–311 AD) erected

[77] Lazić 2004, 109.

[78] Kapuran, Miladinović-Radmilović 2011, T. 1; Kapuran et al. 2014, 100–102, Fig. 96, T. 19–20.

[79] Kapuran et al. 2014, 212.

[80] Srejović, Lazić 1997; Lazić 1998; Lazić 2004; Lazić 2010; Lazić 2016.

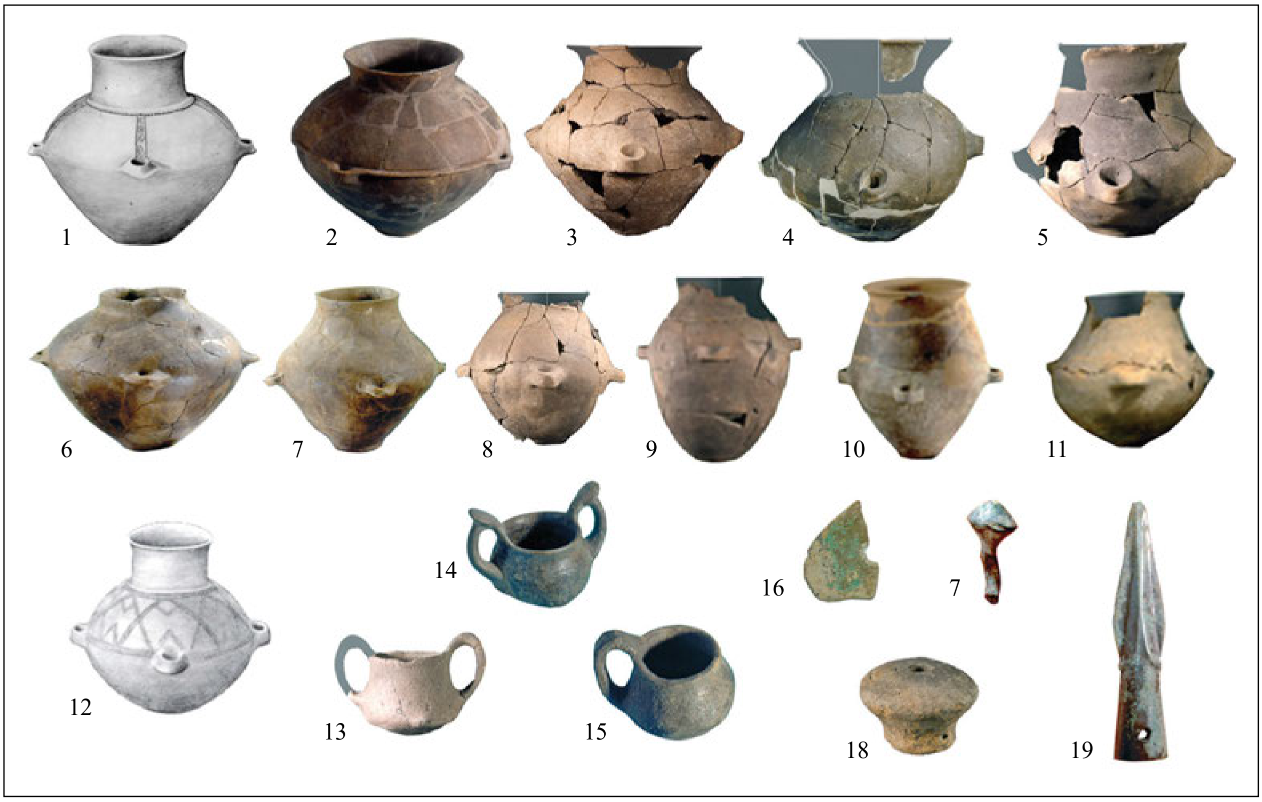


Fig. 6. Urns and grave goods from the Magura necropolis

Сл. 6. Урне и гробни прилози са некрополе Магура

two burial mounds at the same place, one for himself and one for his mother Romula, as well as two temples. Interestingly, the foundations of the antique buildings did not disturb the prehistoric necropolis to any significant degree, as they covered the central portion of the flattened plateau on the top of the hill. The fact that the Romans took into consideration the existence of a prehistoric burial ground indicates that it was still visible during the erection of the imperial mounds. The Romans could have respected the continuity of this sepulchral space and, therefore, selected the Magura hill for the burial of the emperor and his mother.

In terms of the chronological interpretation, the urn cemetery at Magura needs a critical re-evaluation. It is important to emphasise that M. Lazić and D. Srejović considered Magura as well as the nearby hill top settlement at Banjska Stena key sites of the cultural manifestations called the *Gamzigrad Group,* for which they assumed a general dating into the Bronze Age.[81]

Similar to the sites near Bor, stone burial structures from the Zaječar area were made of an outer ring comprised of large stones with an urn in the central part of the construction. However, unlike the cemeteries in the vicinity of Bor, the interspace of stone constructions at the Magura site was filled with slabs made of grey marl. The diameters of the stone structures vary between 1 m and 6 m. In two cases, the urns had a covering made of flat marl slabs. Some of the marl slabs had been engraved with geometrical ornaments such as nets, circles, spirals, and bands of parallel lines. In addition to spindle whorls, two-handled beakers, and cups, the grave goods also included metal artifacts; a fragmented arrowhead made of bronze sheet (Fig. 6/16), a spearhead (Fig. 6/19), and a fragmented biconical head of a pin (Fig. 6/17).[82]

Although a certain number of ceramic vessels from Magura display certain stylistic and typological similarities with the urns from the sites in the vicinity of Bor, there are also significant differences in both form and decoration. Following the discovery of the

[81] Lazić 1998, Lazić 2016, 30–31, Fig. 5/1.

[82] Vasić 2003, 61, T. 22/330.

Magura necropolis, the authors assumed connections with the Vatin and Paraćin groups of the Danube and Morava regions, along with the Verbicioara group of Oltenia.[83] In their later works however, such parallels have been abandoned. Some peculiarities of the burials at Magura, such as decorated stone lids, handles modelled as recipients (cup-shaped) (Fig. 6/1,3,4,5), and incised ornaments (Fig. 6/1,12), led D. Srejović and M. Lazić to a definition of the Gamzigrad group in which they also included the sites of Trnjane, Hajdučka Česma and Borsko Jezero.[84] According to the available data and the degree of research at the time, such interpretations were based on relatively solid foundations. However, in light of updated results and the discovery of new sites, it is necessary to revise such a standpoint, especially considering the significant change in the chronology and that the urn cemeteries near Bor are considerably older (20th–18th century BC) than previously assumed (14th–11th century BC[85]).

A critical review of the genesis and the validity of the definition of the Gamzigrad group should start with analyses of the style and typology of the urns, along with the analogies of grave goods from the Magura necropolis. The ornaments of bands of incised lines organised in simple or elaborate geometric systems (Fig. 6/ 1,12) are similar to the decorations of the urns from the earlier phase of the Belegiš group. Illustrative of the connections between the urns from Magura and Belegiš I is the vessel from Grave 40, as well as an urn for which we have no data regarding context (Fig. 6/1,12). Both have a slightly biconical form with a wide belly, a long cylindrical neck, and decoration consisting of incised lines or elaborate geometric shapes.[86] The urn from Grave 63 is almost identical to vessels common for the Verbicioara group (Fig. 6/2), both in terms of the everted neck and the characteristic horizontal rib. Similar vessels also appear in the territory of Banat, in Vatin (Fig. 11/1)[87] and Crvenka (Fig. 11/2).[88] The previously mentioned Grave 63 from Magura is one of very few without a circular stone construction, and it had a bronze spearhead as a grave good (Fig. 6/2).[89] As highlighted, among the published urns from Magura, some of the vessels display similarities with urns from sites in the vicinity of Bor, as well as with urns from cemeteries of the Paraćin group in the Morava Valley. These finds and the new chronological assessment of the urn cemeteries in north-eastern Serbia speak in favour of the assumption that the cultural influence from the east spread towards the central parts of Serbia during the transition from the Middle to the Late Bronze Age. However, it should be also considered that the urns with elongated and everted necks and incised ornaments from Magura (Fig. 6/1–4.12) have no close analogies among finds from the Timok Basin nor the Morava region. For handles modelled in forms of small recipients (cup-shape), which M. Lazić describes as a characteristic of an earlier phase of the Gamzigrad group, parallels are to be found in some sites in the vicinity of Bor,[90] in Antimovo near Vidin in Bulgaria and in a wider territory between Aegean Macedonia and Transylvania.[91] The same author considers that the common elements in decoration emerged due to the interaction with coexisting groups in the surroundings.[92] Such an argument can be considered valid if we assume the dating of Magura in the period after the middle of the 2nd millennium BC. It is most likely that M. Lazić made a potential misjudgement when incorporating and recognising the influences from the surrounding Middle Bronze Age groups on the Gamzigrad group without knowing the exact time span of the Magura cemetery. The current chronology of the Magura rests upon metal finds and does not correspond with the new absolute dates for the sites in the Bor area.[93] Pins with biconical heads are, in the territory of Serbia, characteristic of the Late Bronze Age as they occur in hoards of the Br D–Ha A1 horizon.[94] A spearhead from Grave 63 (Fig. 6/19) is in the typology that L. Leshtakov assigned to group H XII, with most corresponding finds also dating between Br D and Ha A1.[95] Spears attributed to the same type from northern Germany and Scandinavia date to the same period.[96] Relying on the chronological frame of Magura provided

---

[83] Srejović, Lazić 1997, 240.

[84] Srejović, Lazić 1997, 241.

[85] Jovanović 1999, 73.

[86] Srejović, Lazić 1997, Fig. 33.

[87] The vessel is deposited under number i.b. 9985 in the City Museum of Vršac.

[88] Tasić 1974, 210, fig. 139.

[89] Srejović, Lazić 1997; Lazić 2016.

[90] Two fragments were discovered during the survey. The example from the site of Čoka Njica could belong to an urn from a destroyed grave, since circular stone structures have been recorded at the site.

[91] Lazić 2016, 32, Fig. 7/4.

[92] Lazić 2016, 33.

[93] Srejović, Lazić 1997; Lazić 2016.

[94] Vasić 2003, 61, T. 22/330.

[95] Leshtakov 2015, 106, T. 156.

[96] Jacob-Freisen 1967, 198, T. 107/1.

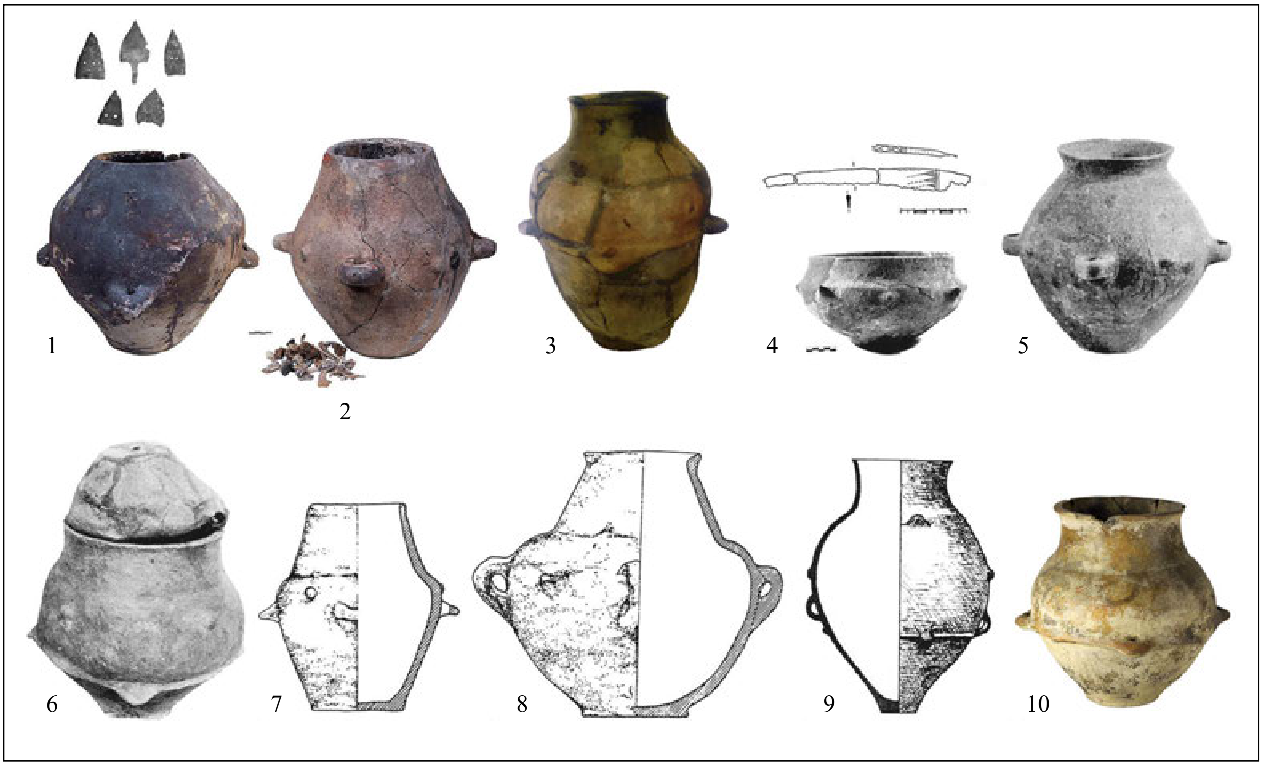


Fig. 7. 1–2. Rutevac; 3, 10. Obrež; 4. Đurinac; 5. Zvezda; 6. Rajkinac; 7–8. Mađilka; 9. Dobrača

Сл. 7. 1–2. Рутевац; 3, 10. Обреж; 4. Ђуринац; 5. Звездан; 6. Рајкинац; 7–8. Мађилка; 9. Добрача

by authors of excavations, R. Vasić linked the spearhead from Magura with the Vatin and Verbicioara groups, and presumed a dating to the Br B/C periods or Middle Bronze Age. Interestingly, R. Vasić dated other finds of this type from Serbia to Br D–Ha A1 periods.[97] The fragmented and perforated arrowhead made of bronze sheet (Fig. 6/16) displays close analogies with finds from graves in Rutevac near Aleksandrovac (Fig. 7/1),[98] and Donja Brnjica near Priština.[99] The urn cemetery of Donja Brnjica, which produced almost identical arrowheads, belongs to an early phase of the Brnjica group, with a most probable dating in Bz D, which corresponds to the 14th/13th century BC.[100]

While the final judgement regarding the chronological relationship between the cemeteries in the Bor area and Magura will be possible only after the publishing of further absolute dates, it is indicative that, according to the bronze finds, the upper chronological span of the Magura site falls between the 16th and 15th century BC. In contrast, the urn cemeteries mentioned near Bor (Trnjane, Borsko Jezero, Kriveljski Kamen and Hajdučka Česma) all date between the 20th and 18th century BC.

Besides differences in the way the urns are decorated (incising of elaborated motifs and bands of lines), it should be pointed out that one of the urns from the Magura cemetery and one further from the nearby site of Zvezdan had the so-called *Pseudo-Buckel* protomes (Fig. 6/6).[101] Since such a decoration is usually linked to the Tumuli culture of the Middle Bronze, these finds contradict the recent opinion about the non-existing elements of Tumuli culture in the Timok Basin.[102] The *Pseudo-Buckel* protomes could indicate the presence of certain cultural influences from the Morava region, or the Paraćin group, during the middle of the 2nd millennium BC, towards the Timok Basin (in this particular context). Interestingly, *Buckel* protomes have not been recorded on any of the urns from the sites near

97 Vasić 2009, 47, T. 9/113.
98 Todorović, Simović 1959.
99 Srejović 1960.
100 Parović-Pešikan 1995, 18, 23; Stojić 2000, 11.
101 Lazić 2016, Fig. 2/7; Srejović, Lazić 1997.
102 Bulatović et al. 2018, 127.

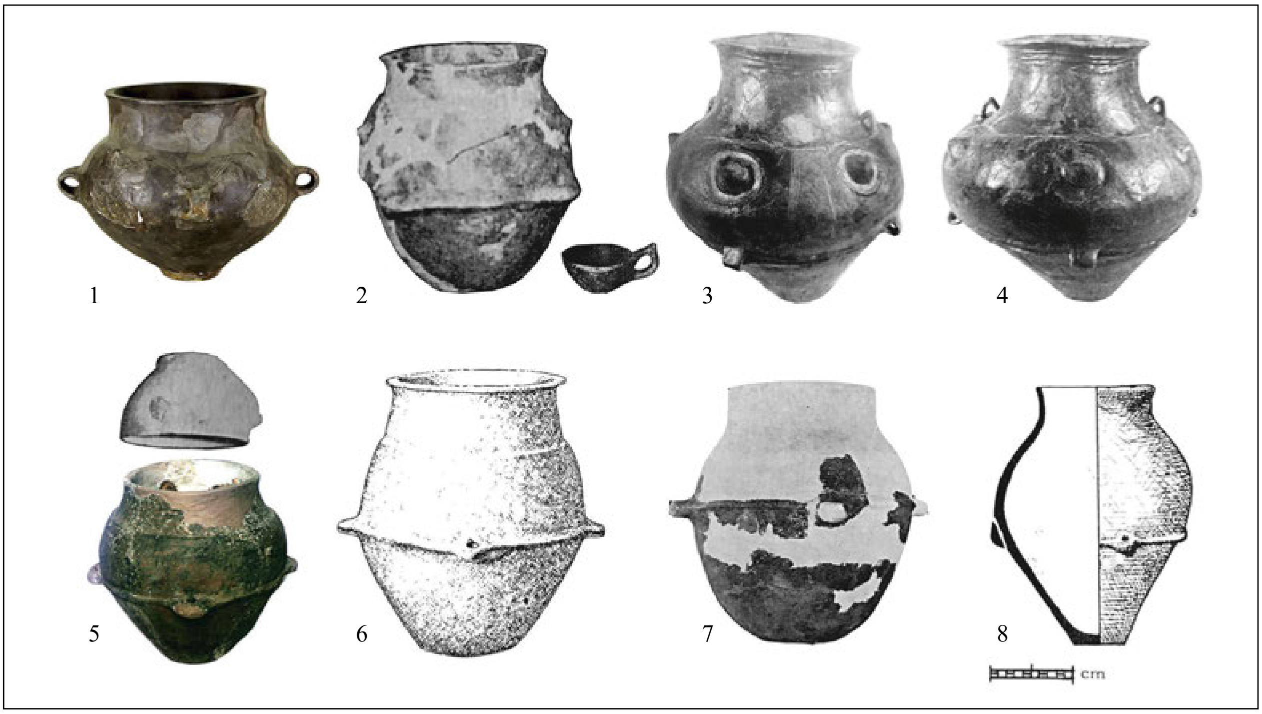


Fig. 8. 1. Bela Crkva, Humka 3, Urna 1; 2. Maćija; 3–4. Mojsinje; 5. Maćija; 6. Makrešane; 7. Despotovac; 8. Dobrača

Сл. 8. 1. Бела Црква, Хумка 3, Урна 1; 2. Маћија; 3–4. Мојсиње; 5. Маћија; 6. Макрешане; 7. Десӣоӣовац; 8. Добрача

Bor, which does not come as a surprise, considering their dating into the first half of the 2nd millennium BC i.e., before the Tumuli culture phenomenon. However, *Buckel* decorations are common on urns attributed to the Paraćin group, as clearly shown on the examples from Rutevac (Fig. 7/1–2),[103] Obrež near Varvarin (Fig. 7/3,10),[104] Đurinac near Petrovac (Mlava) (Fig. 7/4),[105] Rajkinac near Jagodina (Fig. 7/5),[106] and Stalać.[107] The same decoration also appears on two urns from the Mađilka burial site near Pirot.[108]

Cultural and chronological dynamics in the Morava Valley – new absolute dates

Given that the absolute dates were, thus far, not available for the urn cemeteries assigned to the Paraćin and Brnjica groups, it is difficult to make an association with north-eastern Serbia (Timok Basin), where urn cemeteries started around 2000 BC. For the area of the Brnjica group in southern Serbia, absolute dates from the settlement sites indicate the period between the 14th and 11th century BC, and are, thus, much younger than the urn cemeteries and associated settlements in the Bor area.[109]

Here, we present the very first absolute dates from the urn cemeteries Rajkinac and Gloždak, assigned to the Paraćin culture, as well as the dates from the site of Mađilka in the contact zone between the designated areas of the Paraćin and Brnjica groups. In addition, we also bring an absolute date from the site of Medoševac near Niš, with an inventory (bronze finds) connected to the Tumuli culture.

In the case of Rajkinac, the dates are from anthropological remains from one of three graves within the stone ring.[110] Two samples were analysed from one of the graves (cremated human remains), and the dating

103 Todorović, Simović 1959, fig. 2, 5.

104 Tasić 1991, 122; Tasić 2001, fig. 3; Stojić, Čađenović 2006, 294–296.

105 Trbuhović 1961, fig. 3.

106 Stojić 1980; Stojić 1994.

107 Stojić, Čađenović 2006, fig. 32.

108 Jevtić 1990.

109 Bulatović et al. 2021, Tab. 1.

110 Stojić 1994.

was conducted at the Isotoptech Laboratory in Debrecen. The absolute dates were calibrated by OxCal v. 4.4.2.[111] Both samples from Rajkinac yielded almost identical values (DeA-34106: 3047 ± 46 and DeA-34107: 3056 ± 48), while the calibrated dates fall between 1430 and 1130 BC, with a higher probability between the 14th and the 13th century BC (Fig. 12 and Fig. 13). The dates from Rajkinac are the first tangible evidence that urn graves from the sites in the Morava region, assigned to the Paraćin group, are strikingly younger than the urn cemeteries near Bor in the Timok Basin. In the context of the available absolute dates from the Central Balkans, the grave from Rajkinac would approximately be concurrent to the central grave (cremation without urn) of Mound 4 at the site of Krstac –Ivkovo Brdo in western Serbia,[112] and to the dates from the settlement layers at the sites of Svinjište and Medijana in southern Serbia.[113]

The Gloždak cemetery[114] is one of the key sites for the dating of the Paraćin group. D. Garašanin identified two groups of graves at the site and concluded that the burials could be separated into two phases; the earlier, belonging to the Late Bronze Age, and the later one from the Transitional Period (Fig. 9/4–6).[115] Here, we present two absolute dates from Gloždak, which support the assumption of two distinct phases at the cemetery. The absolute dates, calibrated with the same parameters as the previously mentioned samples from Rajkinac, originate from cremated remains in Grave 1/1956 (DeA 34114) (Fig. 9/4) and Grave 4/1956 (DeA 34113) (Fig. 9/5). The absolute date of Grave 1 is 2987 ± 44 BP with a calibrated span between 1390 and 1050 BC (Cal2-sigma), and Grave 4 is almost a century older with an absolute date of 3096 ± 44 BP and a calibrated span between 1490 and 1220 BC (Fig. 12). Interestingly, based on a stylistic and typological obser-

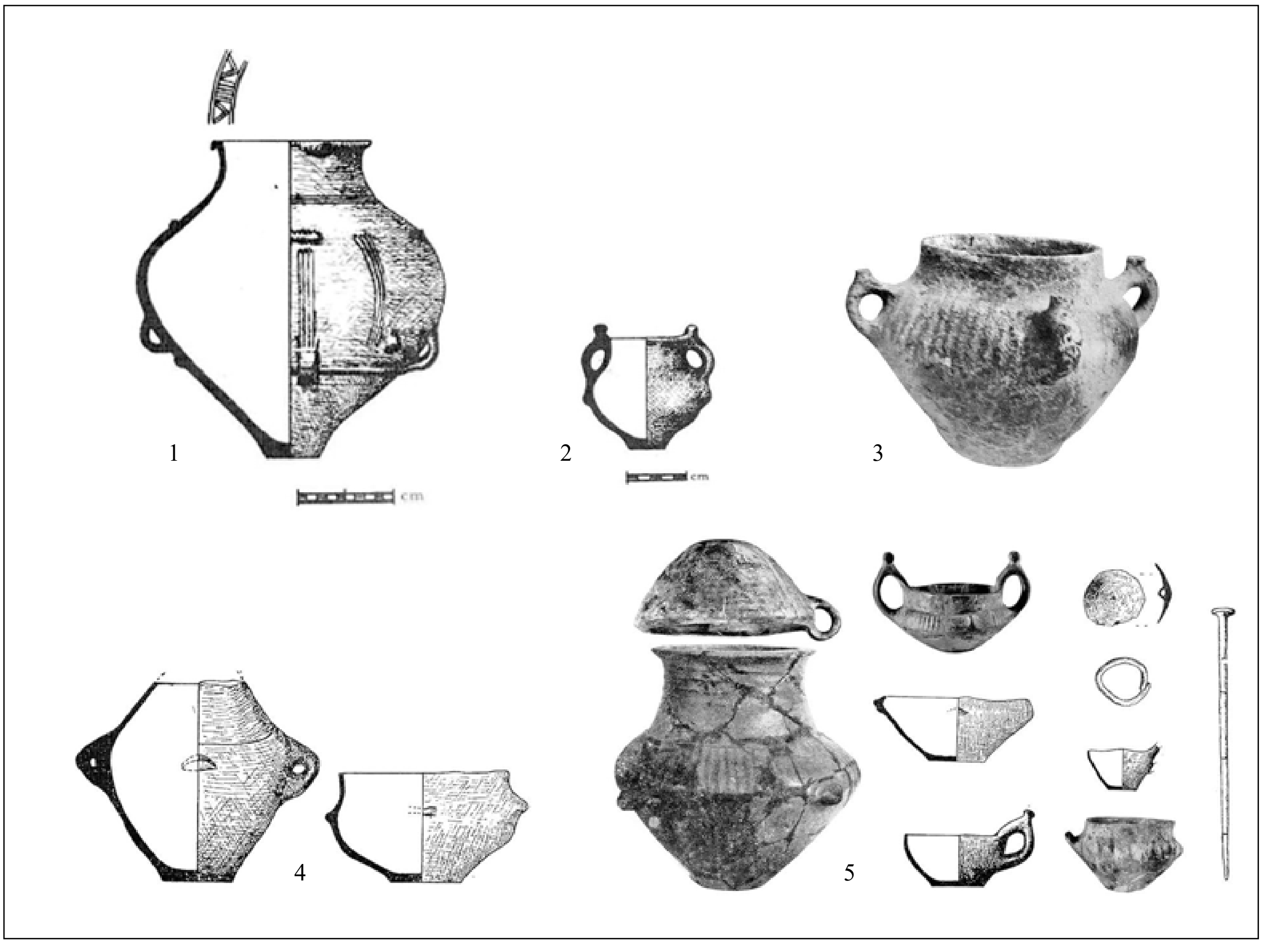


Fig. 9. 1–2. Dobrača; 3. Dvorište; 4–5. Gloždak

Сл. 9. 1–2. Добрача; 3. Двориште; 4–5. Глождак



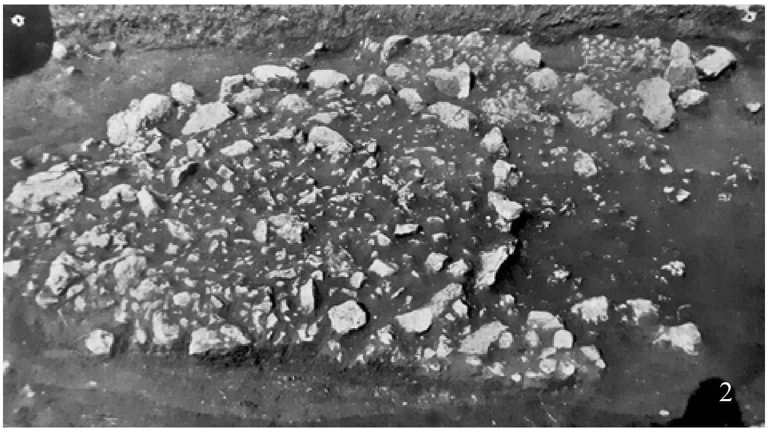


Fig. 10. 1. Rajkinac necropolis; 2. Mađilka necropolis

Сл. 10. 1. Некропола Рајкинац; 2. Некропола Мађилка

vation, an opposite conclusion was drawn. According to D. Garašanin's classification, pottery decoration and inventory from both graves, Grave 4 would represent the younger, and Grave 1 the older phase. The presented dates are certainly insufficient for a final conclusion on the chronology of the Gloždak site, especially considering that both dates have a wide chronological span with mutual overlaps (transition between the 14th and the 13th century BC). Moreover, both dates are from cremated remains and, thus, probably indicate the age of the fuel (wood) used for the pyre. However, it is striking that Grave 1, which contained a ceramic repertoire typical of the Paraćin group (urn, bowl), is younger than Grave 4 with channelled vessels, usually connected with the expansion of channelled pottery towards the south.[116] Regarding the other available dates in the Central Balkans, Grave 4 is chronologically associated with the central grave of Mound 18 from the Brezjak necropolis (Paulje, north-western Serbia), and with Grave 107 from the Velebit burial site in the north of Vojvodina.[117] The younger Grave 1 corresponds to the dates of settlements in southern Serbia attributed to the Brnjica group, such as Končučlj and Svinjište.[118]

One of the crucial sites for a better understanding of the mutual relationships between the Paraćin and Brnjica groups, and the sites in the north-eastern Serbia, is the Mađilka urn cemetery. The site is located in south-eastern Serbia near Pirot, and shows remarkable similarities with the urn cemeteries in the Timok Basin. Mađilka was excavated in 1987 and 1988, with most of the site disturbed by foundations of younger structures.[119] The burial architecture is comparable to the sites in the Bor and Zaječar regions, with the urns positioned within circular stone structures. In some cases, several urns were buried within one stone structure, either in their central or peripheral zones (Fig. 10/2). A total of 40 graves has been recorded (of which only 23 are preserved), distributed within 7 circular stone structures, with a diameter between 3 m and 5 m. The author of the excavations came to the conclusion that the cremated remains of younger individuals were buried without urns, directly on the ground and covered with bowls, usually within the peripheral zones of the stone circles.[120] The plan of the site has not been published, but one of the few available illustrations shows that the urns were deposited in the centre of a smaller stone circle, which is surrounded by a larger one. According to the photos in the Museum of Ponišavlje in Pirot, the space between the small and

---

[111] We would like to thank Dr Lyndelle Webster (Austrian Archaeological Institute) for her assistance in the calibration of absolute dates.

[112] Dmitrović 2016, 101: Bulatović et al. 2018, 123.

[113] Bulatović et al. 2022.

[114] Although the site is in the literature known under the term Gloždar, its local name is Gloždak.

[115] Garašanin 1958a; Garašanin 1970, 122. V. Vilipović, V. Vučković, and J. Mitrović will soon publish a series of absolute dates from the site. Based on these results, the upper chronological limit at Gloždak does not surpass the 15th century BC.

[116] Bulatović et al. 2021.

[117] Bulatović et al. 2018, Tab. 1; Kapuran 2019, 93.

[118] Bulatović et al. 2021, Tab. 1.

[119] Jevtić 1990.

[120] Jevtić 1990, 93.

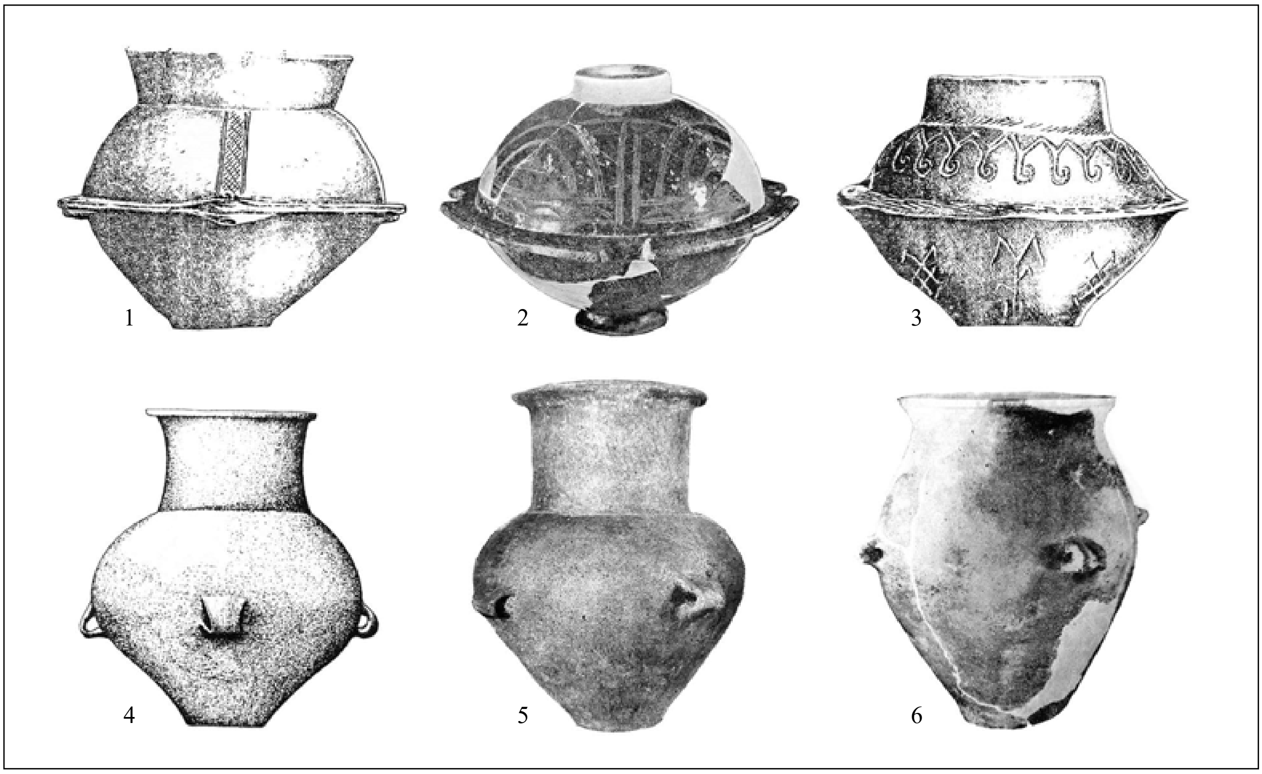


Fig. 11. 1. Vatin; 2. Crvenka; 3. Ludoš; 4. Stojića gumno; 5. Karaburma; 6. Vatin

Сл. 11. 1. Ваūин; 2. Црвенка; 3. Лудош; 4. Сūојића īумно; 5. Карабурма; 6. Ваūин

large stone circle was filled with smaller stones (Fig. 9). This resembles the burial traditions known from the Magura and Kriveljski Kamen–Bunar sites. Judging by the grave goods, which are more abundant than in the case of cemeteries in the Timok Basin, and by the stylistic and typological characteristics of the urns, the Mađilka necropolis is much closer to the Brnjica group. However, of particular interest are two urns with typological traits more typical of the Paraćin group. They are both belly-shaped with tongue shaped handles and *Buckel protomes* in between.[121] What is also indicative of Mađilka is the appearance of the smaller beakers or kantharoi, lavishly decorated with a white incrustation that some authors connect with western Bulgaria and an area of the Čepin group.[122] However, in the systematic evaluation of the two-handled beakers in the Central Balkans by A. Bulatović, the finds from Mađilka are attributed to the so-called Paraćin type, distinguished by decorations with either an incised inverted letter V or letter M, and with spiral endings.[123] Additionally, among the finds from Mađilka is also a beaker with an extremely biconical recipient on a high foot. This is a shape uncommon for urn cemeteries in eastern and Central Serbia, and points more to the Tumuli culture.[124] The next analogy is a similar beaker from the burial mound of Lugovi near Zvornik, in eastern Bosnia.[125] It can be presumed that some of the beakers or other smaller vessels had the function of a lamp, probably with a chthonic background. In this context, we should mention small ladle-shaped cups from Trnjane and Hajdučka Česma, also identified as lamps,[126] as well as smaller jugs from the site of Iđoš in the area of Banat, which most likely had the same function.[127] Given the heterogeneous character of the finds from Mađilka with elements of the Brnjica and Paraćin groups, grave architecture similar to north-eastern Serbia and some vessels indicating a link to the Tumuli

[121] Graves VI/3 and VII/1, Jevtić 1990, 101.
[122] Hänsel 1976; Jevtić 1990, 102; Lazić 1996, 43.
[123] Bulatović 2011, 125.
[124] Jevtić 1990, T. V/13.
[125] Kosorić 1992, T. 3/3
[126] Kapuran et al. 2020).
[127] Molloy, Milić 2018, 109.

culture, it was intriguing to know what age the obtained absolute date would point to, since any possibility between the 19th/18th and the 12th century BC is not ruled out. Of two urns with characteristics of the Paraćin group, cremated human remains were preserved only in Grave VII/1. The absolute date acquired from the cremated remains is 3149 ± 46 BP (DeA-34110), and the calibration indicated a span between 1510 and 1290 BC (Cal 2-sigma. The date, although, representing one sample from one grave, indicates that the Mađilka site could be slightly older than the urn cemeteries of the Paraćin group in the Morava Basin. A date with a similar span is known from the site of Svinjarička Čuka near Lebane, with traces of a Late Bronze Age occupation.[128] If confirmed, the dating of Mađilka to the 15th century BC could connect this site with Magura, already indicated by a similar burial architecture. Therefore, the Magura and Mađilka cemeteries could represent both the chronological and the cultural link between considerably older urn cemeteries near Bor and cremation burial sites assigned to the Paraćin group in the Morava Basin, as well as the Brnjica group in southern Serbia.

Tumuli culture and the Central Balkans

The question of cultural dynamics in the Morava Valley during the Early and Middle Bronze Age remains open, considering that the sites from the end of the 3rd to the beginning of the 2nd millennium BC are, thus far, underrepresented (Ostra near Vrnjačka Banja and Ljuljaci near Kragujevac). Based on the stylistic and typological traits of the urns and new radiocarbon dates, it is reasonable to assume that the formation of a specific style of decoration at the Magura cemetery was, to a certain extent, influenced by the Tumuli culture, with some elements also pointing to the eastern part of the Carpathian Basin and Oltenia. According to currently available data, the cultural elements connected to the Tumuli culture started to appear in the Central Balkans first in western Serbia or the west of the Morava Valley following the Early Bronze Age.[129] From this area, some elements also spread to the east, reaching the Timok Basin (Magura) and partly into southern Serbia.[130] According to N. Tasić, the process of the expansion of influences of the Tumuli culture across the Central Balkans occurred during the middle of the 2nd millennium BC, or at the beginning of the Late Bronze Age.[131] Such an opinion is somewhat confirmed by an absolute date from the Paulje tumuli cemetery, which falls between the 15th and the 13th century BC.[132]

When it comes to the stylistic and typological characteristics of the urns from burial sites in western Serbia, another important aspect needs to be addressed. This is the presence of incised and impressed ornaments that can be linked with the Danube area and cemeteries of the Belegiš I or Belegiš–Cruceni group.[133] The connection between the Belegiš–Cruceni group and the preceding or partially overlapping encrusted pottery complex has been demonstrated in several studies.[134] For instance, beakers with encrusted pottery occur in several graves of the large cemetery of Stojića Gumno.[135] Following the interpretation of N. Tasić, the encrusted pottery played a significant role and influenced the manner of decoration of the Belegiš pottery, especially the ornaments described as false cord.[136] However, an interesting observation based on the anthropological analyses of the cremated remains from the Kaluđerske Livade urn cemetery suggests an opposite conclusion. As the analyses revealed, urns decorated with false cord contained remains of male individuals, while females were in urns decorated with bands of incised lines. This sheds new light on the burial ritual, confirming that differences in the decoration of urns are not necessarily connected to chronology.[137] In the case of western Serbia, it is important to highlight that within tumuli burials, *Buckel protomes* characteristic of the Tumuli culture often occur together with incised and impressed decoration on the same urn. In Mound 3 at the site of Bandera near Bela Crkva, an urn with a wide belly, cylindrical neck, and *Buckel* protomes, was found in a grave together with bronze jewellery typical of the Tumuli culture (spherical applications, and horseshoe- and heart-shaped pendants) (Fig. 8/1).[138] Moreover, the urn was additionally decorated with bands of arched incisions, while vertical and zig-zag lines covered the part between the *Buckel protomes* and the lower part. Similar incised arches in combination with *Buckel* protomes are especially

128 Horejs et al. 2019.
129 Bulatović et al. 2017, 52.
130 Tasić 1972, 94; Kapuran 2019, 7, Map. 2.
131 Tasić 1972, 94.
132 Gligorić et al. 2016, 105, Fig. 3.
133 Tasić 1972; Szentmiklosi 2006.
134 Tasić 2002; Petrović 2006.
135 Tasić 2002, 175.
136 Tasić 2002, 174.
137 Petrović 2006, 149.
138 Garašanin, Garašanin 1958, 38–39, Fig. 10. 15.

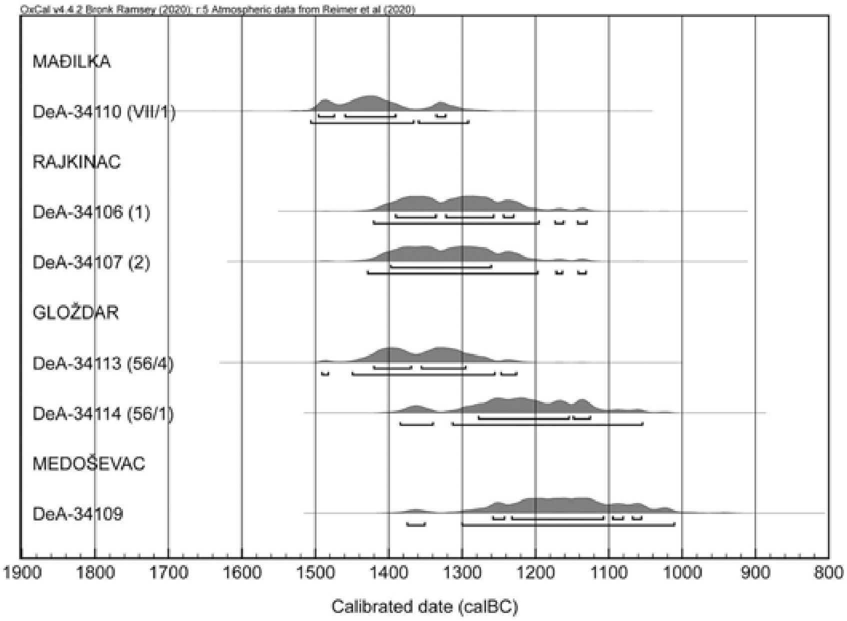


Fig. 12. Absolute dates from the Mađilka, Rajkinac, Gloždak and Medoševac necropolises

Сл. 12. Айсолуйни дайуми са некройола Мађилка, Рајкинац, Глождак и Медошевац

characteristic for the earlier phase of the Belegiš I group, as seen on urns from the Stojića Gumno in Belegiš,[139] Karaburma,[140] Ludoš near Vršac,[141] and graves 6 and 17 from Stubarlija.[142]

Influences of the Tumuli culture and Belegiš I group on the Bronze Age communities of western and Central Serbia are also found in the ceramic inventory of cemeteries in Dobrača near Kragujevac,[143] Mojsinje and Krstac near Čačak. The most prominent example is certainly the tumuli cemetery of Mojsinje.[144] Urns with a wide belly and cylindrical neck, decorated with *Buckel protomes* from mound 1[145] have decoration identical to that on urns from Velebit,[146] Stojića Gumno,[147] Karaburma[148] and Iđoš,[149] which are all situated north of the Danube and Sava rivers. Relevant for the chronology of Mojsinje burials are two bronze pins, one of the *Hülsenkopfnadeln* type and the other of the *Lochhalsnadel mit doppelkonischem kopf und vierkantigem schaft* type, both dated to Br C1.[150] An additional chronological framework for the presence of the Tumuli culture in western Serbia was provided with an absolute date between the 15th and 13th century BC from the site of Krstac–Ivkovo Brdo, with an urn from Grave 3 (Mound 2), decorated with typical *Buckel protomes.*[151] Further similar urns of the Tumuli culture type have also been uncovered in Mound 3 at the Donja Kravarica site.[152] All these finds suggest a close affiliation to the Tumuli culture burial sites within the West Morava region, from where certain elements could also reach Central and eastern Serbia.

Regarding the influences of the Tumuli culture in southern Serbia, a collective find of bronze jewellery from Medoševac, now in the National Museum in Niš, is one of the most indicative examples.[153] Following the original publication, the metal finds appear to originate from a grave context.[154] Thanks to the revision of finds housed in the National Museum in Niš it has been confirmed that the jewellery was discovered during earthworks in 1969, at a military airport in a suburb of Niš called Medoševac.[155] An urn was discovered at a depth of 0.5 m, surrounded with fist-sized pebbles,

---

139 Vranić 2002, Nr. 53 and 74.
140 Todorović 1977, 88, 101, 202, 205.
141 I.B. 10379, NM Vršac.
142 Medović 2007.
143 Garašanin 1973, 361.
144 Nikitović et al. 1997; Stojić 1998; Nikitović et al. 2002.
145 Nikitović et al. 2002, T. IV/1, T. VII/41, T. VIII/46.
146 Kapuran 2019, Fig. 78/1.
147 Vranić 2002, 152/130.
148 Todorović 1977, 47, 48.
149 Tasić 1974, 529/186.
150 Vasić 2003, 16, 29–30.
151 Bulatović et al. 2018, 123.
152 Dmitrović 2016, Fig. 7.
153 Garašanin 1972; Kapuran 2019a.
154 Garašanin 1972, 43.
155 We are grateful to P. Milojević and T. Trajković Filipović for this information.

Labornr // AMS 14C Lab Code | HEKAL Sample Nr.	Site /Context	Material	14C Alter [yr BP]	Cal 2-sigma	Labor	Calibration data set
DeA-34110	Mađilka Grave VII/1	cremated bone	3149 ± 46	BC 1510 – 1290	Isotoptech Zrt. Debrecen	INTCAL20
DeA-34106	Rajkinac Grave_Sample 1	cremated bone	3047 ± 46	BC 1430 – 1130	Isotoptech Zrt. Debrecen	INTCAL20
DeA-34107	Rajkinac Grave_Sample 2	cremated bone	3056 ± 48	BC 1430 – 1130	Isotoptech Zrt. Debrecen	INTCAL20
DeA-34113	Gloždar _56/4	cremated bone	3096 ± 44	BC 1490 – 1220	Isotoptech Zrt. Debrecen	INTCAL20
DeA-34114	Gloždar _56/1	cremated bone	2987 ± 44	BC 1390 – 1050	Isotoptech Zrt. Debrecen	INTCAL20
DeA-34109	Medoševac	cremated bone	2954 ± 50	BC 1380 – 1010	Isotoptech Zrt. Debrecen	INTCAL20

Fig. 13. Absolute dates from the Mađilka, Rajkinac, Gloždak and Medoševac necropolises

Сл. 13. Айсолуйни дайуми са некройола Мађилка, Рајкинац, Гloждак и Медошевац

and covered with stone. In addition, the report mentions that skeletal remains were found at the same location in previous years. There is no photo or drawing of the mentioned urn. The storage box in the museum marked as "Medoševac" contained only cremated human bones and a fragment of a channelled, high lifted handle belonging to a cup/beaker. Based on this, Medoševac may represent an unknown bi-ritual necropolis, which cannot be further excavated due to its position. The mentioned skeletal graves and the bronze jewellery from one of the graves could indicate the possible influences or presence of the Tumuli culture in this area.[156] The analysis of burnt remains from the urn yielded an absolute date of 2954±50 (DeA-34109) with a span between 1380 and 1010 BC (Cal 2-sigma), and with a dating to the end of the 13th and into the 12th century statistically most probable (Fig. 12). In the context of recently published dates from southern Serbia, a similar age is attested for cultural layers at Ranutovac and Hisar, with pottery of the Brnjica group and channelled pottery of the Belegiš II–Gava horizon.[157] Since the jewellery from Medoševac undoubtedly represents forms typical of the Tumuli culture, and the obtained absolute date from the cremation remains is younger, the question arises as to the context of the unburned jewellery items and the possibility that it belonged to one of the skeletal graves. If that is the case, the urn would represent the later phase of the burial site, from the Late Bronze Age (13th–12th century BC).

Conclusion

Thanks to the results from the past decade, newly obtained absolute dates, and the stylistic and typological analyses of pottery from cremation graves, we have tried to propose a new narrative for the genesis of the Bronze Age groups in Serbia, south of the Sava and Danube rivers. Following the relatively modest archaeological record from the Early Bronze Age, the situation substantially changed during the Middle and Late Bronze Age with the emergence of different local groups with urn cemeteries as the main burial practice. In terms of the transition from the Early to the Middle Bronze Age in the Morava, Timok and Nišava Basins, the appearance of the Bubanj–Hum IV – Ljuljaci pottery spectrum, as defined by A. Bulatović and J. Stankovski, for now represents the best parameter.[158]

As testified by the recently presented absolute dates, cremation as a dominant burial rite was practiced in different local communities of the Central Balkans during the transition from the 3rd to the 2nd millennium BC, making this area one of the first that completely adopted this practice.[159] The building of circular stone constructions around the urn, as in the

156 Vasić 1997; Kapuran 2019a.
157 Bulatović et al. 2021, Tab. 1.
158 Bulatović, Stankovski 2012, 343.
159 Cavazutti et al. 2022.

case of cemeteries near the city of Bor, or around the cremated remains, as in Ranutovac in southern Serbia, seems to be another connecting element shared by groups in the Central Balkans. There are also cemeteries with similar stone constructions around urns in Northern Greece,[160] possibly indicating a far wider spread of this phenomenon during the transition from the 3rd to the 2nd millennium BC than previously assumed.

The absolute dates presented here from the urn cemeteries in Rajkinac and Gloždak, assigned to the Paraćin group in the Morava Basin and Mađilka (Brnjica group) in the Nišava Basin with comparable stone features around the urns, show a much younger age (15th–13th century BC) when compared to the sites in north-eastern Serbia, near Bor (20th–18th century BC) or to Ranutovac (21st–19th century BC). Judging by the current state of the research, similar pottery to that in the sites near Bor accompanied by a typical burial practice (urns and circular stone structures) first started to appear in the area along the Morava river and in the other parts of eastern and Central Serbia from the middle of the 2nd millennium. The significant chronological gap between the sites in the Bor region (urn cemeteries and settlements involved in copper production) and the urn cemeteries in the Morava and Nišava Basins (Paraćin and Brnjica groups) suggests more complex and differentiated cultural interactions than previously thought. Even within the Timok Basin there are apparently two regionally and chronologically separated developments, with the sites around Bor all dating between 2000–1600 BC and urn cemeteries around Zaječar (Magura) that appear to start around 1500 BC, just as the settlements and cemeteries near Bor ceased. Therefore, we consider that the term *Gamzigrad group,* as defined previously,[161] is not adequate to describe the entire Bronze Age development in north-eastern Serbia. To a certain extent, it can be applied only for the micro-region around Zaječar during the Late Bronze Age.

In terms of cultural interpretation, we also find that the sites near Bor (Trnjane, Hajdučka Česma) cannot be connected with the Paraćin group, as stated in previous studies,[162] due to the significant chronological disparity. At the current level of research and based on the available absolute dates, we can assume that the burial practice with urn cemeteries and circular stone constructions was first performed by the communities near the city of Bor that were engaged in copper production. From this geographically isolated area, certain cultural traits, including burial architecture and some specific pottery shapes, started to transfer into the neighbouring regions with a chronological delay of two or three centuries. The cemeteries of Magura and Mađilka could be observed within the wider context of the diffusion of influences from north-eastern Serbia towards the Morava and Nišava Basins. At the same time, we have also demonstrated that the archaeological material from the time around 1500 BC, as most of the urn cemeteries outside the Bor area emerged, also shows a presence of certain forms and decorations from the Tumuli culture, which most probably came from western Serbia. Some finds from Magura also indicate communication with the Verbicioara group in Oltenia. Hence, the archaeological repertoire in Magura appears to be the result of a mixture of several stylistic and typological characteristics with certain local traits (stone decorated slabs) that, all together, created a specific cultural manifestation. Similar pattern with influences from north-eastern Serbia, the Tumuli culture, the eastern Balkans and distinct local traits also led to the emergence of the urn cemeteries in the Morava Basins during the same time span (1500 BC), eventually described as the Paraćin culture.

[160] Asouhidou 2011.
[161] Srejović, Lazić 1997, 241–242; Lazić 1998, 148; Lazić 2016.
[162] Jovanović 1999; Vasić 2013.

BIBLIOGRAPHY:

Asouhidou 2011 – S. Asouhidou, The Early Bronze Age burial mound at Kriaritsi-Sykia, in: Ancestral Landscapes, Burial mounds in the Copper and Bronze Ages, (ed.) Borgna et al, Lyon 2011, 383–390.

Berciu 1961 – D. Berciu, Die Verbicioara-kultur, Vorbericht über eine neue, in Rumänien entdeckte bronzezeitliche kultur. Dacia VI, 1961, 123–161.

Bogdanović 1986 – М. Богдановић, *Љуљаци, насеље протоватинске и ватинске културе*, Крагујевац, Крагујевац 1986. (M. Bogdanović, *Ljuljaci, naselje protovatinske i vatinske kulture*, Kragujevac, 1986).

Булатовић 2008 – А. Булатовић, Стамбени објекат из позног бронзаног доба са локалитета Медијана – сектор југ: прилог проучавању параћинске и брњичке културе, *Гласник САД* 24, 223–244. (A. Bulatović, stambeni objekat iz poznog bronzanog doba sa lokaliteta Medijana – sektor jug: prilog proučavanju paraćinske i brnjičke kulture, *Glasnik SAD* 24, 223–244).

Булатовић 2011 – А. Булатовић, Карактеристичне керамичке форме на централном Балкану и у северној Егеји у позно бронзано доба. *Старинар LXI* 2011, 121–140. (A. Bulatović, Karakteristične keramičke forme na centralnom Balkanu i u severnoj Egeji u pozno bronzano doba, *Starinar LXI* 2011, 121–140).

Bulatović 2020 – A. Bulatović, Ranutovac, an Early Bronze Age Necropolis in sutheastern Serbia. Oxford 2020.

Bulatović 2021 – A. Bulatović, Beakers with trapezodical mouth as one of the most specific type of Middle Bronze Age vessel in the Central Balkans, in: *Crafting pottery in Bronze Age Europe,* V. Vučković at al (eds.) Paraćin 2021, 121–148.

Bulatović, Gori, Vander Linden 2018 – A. Bulatović, M. Gori, M. Vanderlinden, New Absolute Dates as a Contribution to the Study of the Late Bronze Age Chronolgy in the Central Balkans, *Гласник САД* 34 2018, 121–132.

Bulatović, Gori, Vander Linden 2020 – A. Bulatović, M. Gori, M. Vanderlinden, Radiocarbon dating third millennium BC in the Central Balkans: A re-examination of the Early Bronze Age sequence, *Radiocarbon* Vol. 62 2020, Nr 5, 1163–1191.

Bulatović, Molloy, Filipović 2020 – A. Bulatović, B. Molloy, V. Filipović, The Balkan-Aegean Migrations revisited: Changes in Material Culture and Settlement Pattern in the Late Bronze Age Central Balkans in Light of new data, *Старинар* LXXI, 2020, 61–105.

Bulatović, Filipović, Gligorić 2017 – А. Булатовић, В. Филиповић, Р. Глигорић, *Лозница, културна стратиграфија праисторијских локалитета у Јадру, Рађевини и Азбуковици,* Београд–Лозница 2017. (A. Bulatović, V. Filipović, R. Gligorić, *Loznica, kulturna stratigrafija praistorijskih lokaliteta u Jadru, Rađevini i Azbukovici*. Beograd–Loznica 2017).

Bulatović, Kapuran, Janjić 2013 – А. Булатовић, А. Капуран, Г. Јањић, *Неготин, културна стратиграфија праисторијских локалитета Неготинске Крајине*. Београд–Неготин 2013. (A. Bulatović, A. Kapuran, G. Janjić, *Negotin, kulturna stratigrafija praistorijskih lokaliteta Negotinske Krajine*. Beograd–Negotin 2013).

Bulatović, Stankovski 2012 – А. Булатовић, J. Станковски, *Бронзано доба у басену јужне Мораве и у долини Пчиње*. Београд–Куманово 2012. (A. Bulatović, J. Stankovski, *Bronzano doba u basenu južne Morave i u dolini Pčinje*. Beograd–Kumanovo 2012).

Bulatović, Kapuran, Gavranović 2022 – A. Bulatović, A. Kapuran, M. Gavranović, New absolute dates for the Middle and Late Bronze Ages in the central Balkans and some indications of the local bronze metallurgy and workshops, in: *Searching for Gold – Resources and Networks in the Bronze Age of the Eastern Balkans*, R. Jung, H. Popov (eds.), Vienna–Sofia. (in press)

Cavazutti et al. 2022 – C. Cavazutti, A. Arena, A. Cardarelli, M. Fritzl, M. Gavranović, T. Hajdu, V. Kiss, K. Köhler G. Kulcar, E. Melis, K. Rebay-Salisbury, G. Szabo & V-Szeverenyi, The First „Urnfields" in the Plains of the Danube and Po. Journal of World Prehistory 35 2022, 45–86.

Cermanović 1960 – А. Цермановић, Нова некропола жутобрдске културе „Песак" код Корбова, *Старинар* XI 1960, 185–191. (A. Cermanović, Nova nekropola žutobrdske kulture „Pesak" kod Korbova, *Starinar* XI 1960, 185–191).

Crăcuinescu 2004 – G. Crăcuinescu, *Cultura Verbicioara în jumătatea vestică a Olteniei*. Turnu Severin 2004.

Cvijić 1991 – J. Цвијић, *Геоморфологија* I. Београд 1991. (J. Cvijić, *Geomorfologija* I. Beograd 1991).

Dmitrović 2016 – К. Дмитровић, *Некрополе бронзаног доба у регији Чачка*. Чачак 2016. (K. Dmitrović, *Nekropole bronzanog doba u regiji Čačka*. Čačak 2016).

Đorđević 2019 – А. Ђорђевић, Гроб са Конопишта: прилог проучавању праисторије Ђердапа, *Зборник Народног музеја* XXIV–1 2019, 117–141. (A. Đorđević, Grob sa Konopišta: prilog proučavanju praistorije Đerdapa, *Zbornik Narodnog muzeja* XXIV–1 2019, 117–141).

Garašanin 1958 – D. Garašanin, Dobrača „Umka", *Inventaria Archaeologica* II. Bonn 1958, Y 17.

Garašanin 1958a – D. Garašanin, Paraćin „Gloždar", *Inventaria Archaeologica* II. Bonn 1958, Y 14–16.

Garašanin 1958b – Д. Гарашанин, Ка проблему поља са урнама у Србији, *Зборник Народноī музеја* I (1956/57), 297–309. (D. Garašanin, Ka problemu polja sa urnama u Srbiji, *Zbornik Narodnog muzeja* I (1956/57), 297–309).

Garašanin 1970 – Д. Гарашанин, Miscellanea Illirica IV, нови гробни налази из Параћина и почетак периода прелаза из бронзаног у гвоздено доба у Поморављу, *Зборник народноī музеја* VI 1970, 115–138. (D. Garašanin, Miscellanea Illirica IV, novi grobni nalazi iz Paraćina i početak perioda prelaza iz bronzanog u gvozdeno doba u Pomoravlju, *Zbornik Narodnog muzeja* VI 1970, 115–138).

Garašanin 1971 – М. Гарашанин, Праисторијске културе Поморавља и источне Србије, Ниш 1971. (M. Garašanin, *Praistorijske kulture Pomoravlja i istočne Srbije*, Niš 1971).

Garašanin 1973 – М. Гарашанин, *Праисūорија на шлу СР Србије*. Београд 1973. (M. Garašanin, *Praistorija na tlu SR Srbije*, srpska književna zadruga, Beograd).

Garašanin 1983 – M. Garašanin, Paraćinska grupa, in: A. Benac (ed.), Praistorija jugoslovenskih zemalja IV – Bronzano Doba, Sarajevo, 727–735.

Garašanin, Garašanin 1950 – М. Гарашанин, Д. Гарашанин, Археолошка ископавања у Добрачи код Крагујевца. *Исūоријски īласник* 1–2 1950, 182–186. (M. Garašanin, D. Garašanin, Arheološka iskopavanja u Dobrači kod Kragujevca. *Istorijski glasnik* 1–2 1950, 182–186).

Garašanin, Garašanin 1958 – М. Гарашанин, Д. Гарашанин, Ископавање тумула у Белотићу и Белој Цркви, *Зборник народноī музеја* I 1958, 17–50. (M. Garašanin, D. Garašanin, Iskopavanje tumula u Belotiću i Beloj Crkvi, *Zbornik Narodnog muzeja* I 1958, 17–50).

Gavranović, Kapuran, Jovanović 2019 – M. Gavranović, A. Kapuran, I. Jovanović, Urnfelds before Urnfelds? – New results on urn cemetreis in northeastern Serbia, *Prehistoric Communities along the Danube*. Abstract book from Proceedings form the International conference 2019, Osijek, 38.

Gavranović, Antić, Waltenberger 2020 – M. Gavranović, S. Antić, L. Waltenberger, Prehistoric Burial Mounds (tumuli) in Northeastern Bosnia, in: *Visualization of the unknown Balkans*, M. Gavranović, B. Horejs (eds). Wien 2020, 45–58.

Gavranović et al. 2022 – M. Gavranović, A. Kapuran, I. Jovanović,, Urnfields before Urnfields? – New results on urn cemetreis in northeastern Serbia, in: Prehistoric Communities along the Danube, (ed.) M. Dizdar, T. Hršak and D. Ložnjak Dizdar, Osijek–Zagreb 2022 (in press).

Gligorić, Filipović, Bulatović 2016 – R. Gligorić, V. Filipović, A. Bulatović, An AMS dated Late Bronze Age grave from the mound necropolis at Paulje, *Сūаринар* LXVI 2016, 103–109.

Grčki-Stanimirov 1996 – S. Grčki-Stanimirov, Pančevo – „Donja Varoš“ – horizont der ersten sieldungen der frühen bronzezeit in südlichen Banat, in: *The Yugoslav Danube Basin and the Neighbouring Regions in the 2nd Millennium B.C.*, N. Tasić (ed.) Beograd 1996, 69–80.

Hänsel 1976 – B. Hänsel, Beiträge zur regionalen und chronologischen Gleiderung der älteren Hallstattzeit an der unteren Donau, Bonn 1976

Horejs et al. 2019 – B. Horejs, A. Bulatović, J. Bulatović, M. Brandl, C. Burke, D. Filipović & B. Milić, New Insights into the Later Stage of the Neolithisation Process of the Central Balkans. First Excavations at Svinjarička Čuka 2018, Archaeologia Austriaca 103 2019, 175–226.

Ikodinović 1969 – М. Икодиновић, Заштитно ископавање хумке у Лучанима, *Зборник радова Народноī музеја* 1 1969, Чачак, 3–15. (M. Ikodinović, Zaštitno iskopavanje humke u Lučanima, *Zbornik radova Narodnog muzeja* 1 1969, Čačak, 3–15).

Jacob-Friesen 1969 – G. Jacob-Friesen, Bronzezeitliche Lanzenspitzen Norddeutschlands und Skandinaviens, Hildesheim 1969.

Jevtić 1990 – М. Јевтић, Праисторијска некропола у Пироту – прилог познавању брњичке културе, *Гласник САД* 6 1990, 92–103. (M. Jevtić, Praistorijska nekropola u Pirotu – prilog poznavanju brnjičke kulture, *Glasnik SAD* 6 1990, 92–103).

Jovanović 1961 – B. Jovanović, Pojava keramike vatinskog tipa na vinčanskom naselju, *Vesnik muzejsko-konzervatorskog društva* 1–2 1961, 5–14.

Jovanović 1976 – Jovanović, B., Obredi sahranjivanja u kostolačkoj grupi, *Godišnjak Centra za Balkanološka istraživanja* XIII, Sarajevo 1976, 131–142.

Jovanović 1999 – B. Jovanović, Funerary Rites and Tomb Constructions in Necropoles of the Paraćin and Donja Brnjica Cultures, in: *Macedonia and the neighbouring regions from 3rd to 1st Millennium B.C*, E. Petrova (ed.), Skopje 1999, 67–72.

Jovanović, Janković 1987–1990 – B. Jovanović, I. Janković, Nekropola paraćinske grupe u Trnjanima kod Brestovačke Banje, *Zbornik radova Muzeja rudarstva i metalurgije* 5/6 (1987–1990), 1987–1990, 1–20.

Jovanović, Janković 1996 – B. Jovanović, N. Janković, Die Keramik der nekropole der Paraćin-kultur – Trnjane bei Bor, in: N. Tasić (ed.) *The Yugoslav Danube Basin and the Neighbouring Regions in the 2nd Millennium B.C.*, Balkanološki institut SANU, Beograd, 185–199.

Kapuran 2019 – A. Kapuran, Velebit, a Tumulus Culture Necropolis in the Southern Carpathian Basin (Vojvodina, Serbia). Oxford 2019.

Kapuran 2019a – A. Kapuran, The Find from Medoševac 20 Years Later – an Addition to the Studies of the Tumulus Culture on the Territory of the Central Balkans, in: *Зборник радова у част 80. г. живота Растка Васића*, Београд 2019, 165–176. (U: Zbornik radova u čast 80. g. života Rastka Vasića. V. Filipović at al. (eds), Beograd 2019, 165–176).

Kapuran, Bulatović 2012 – А. Капуран, А. Булатовић, Културна група Коцофени–Костолац на територији североисточне Србије, *Старинар* LXII 2012, 65–94. (A. Kapuran, A. Bulatović. Kulturna grupa Kocofeni–Kostolac na teritoriji Srbije, *Starinar* LXII 2012, 65–94).

Kapuran, Bulatović, Jovanović 2014 – А. Капуран, А. Булатовић, И. Јовановић, *Бор и Мајданпек, културна стратиграфија праисторијских локалитета између Ђердапа и Црног Тимока*, Београд–Бор 2014. (A. Kapuran, A. Bulatović, I. Jovanović, *Bor i Majdanpek, kulturna stratigrafija praistorijskih lokaliteta između Đerdapa i Crnog Timoka*, Beograd–Bor 2014).

Kapuran, Gavranović, Jovanović 2019 – A. Kapuran, M. Gavranović, I. Jovanović, Urnfelds before Urnfelds? – New results on urn cemetreis in northeastern Serbia, in: Prehistoric Communities along the Danube, Abstract book from Proceedings, Osijek 2019, 38.

Kapuran, Miladinović-Radmilović 2011 – А. Капуран, Н. Миладиновић-Радмиловић, Некропола на Борском језеру, нови прилозио сахрањивању у бронзаном добу, *Старинар* LXI, 141–153. (A. Kapuran, N. Miladinović-Radmilović, Nekropola na Borskom jezeru, novi prilozi o sahranjivanju u bronzanom dobu, *Starinar* LXI, 141–153).

Kapuran, Miladinović-Radmilović, Jovanović 2013 – А. Капуран, Н. Миладиновић-Радмиловић, И. Јовановић, Кривељски камен–Бунар, нова некропола урнефелдре културе у околини Бора, *Зборник Народног музеја* XXI–1 2013, 145–156. (A. Kapuran, N. Miladinović-Radmilović, I. Jovanović, Kriveljski kamen–Bunar, nova nekropola urnenfelder kulture u okolini Bora, *Zbornik Narodnog muzeja* XXI–1 2013, 145–156).

Kapuran, Milojević 2021 – A. Kapuran, P. Milojević, Vatin culture pottery in settlements and necropoles of Northeastern Serbia, in: *Crafting pottery in Bronze Age Europe,* V. Vučković at al (eds.), Paraćin 2021, 101–120.

Kiss 2012 – V. Kiss, Middle Bronze Age Encrusted Pottery in Wester Hungary, Budapest 2012.

Kosorić 1965 – M. Kosorić, Praistorijska nekropola u selu Dvorovi kod Bjeljine, *Članci i građa za kulturnu istoriju Istočne Bosne* VI 1965, Tuzla.

Kosorić 1992 – М. Косорић, Прилог проучавању хумки Горњег Подриња, *Зборник Народног музеја* XIV–1, 265–276. (M. Kosorić, Prilog proučavanju humki Gornjeg Podrinja, *Zbornik Narodnog muzeja* XIV–1 1992, 265–276).

Krstić 1983 – Д. Крстић, Карактеристика сахрањивања на некрополи бронзаног доба у Корбову, *Зборник Народног музеја* XI 1983, Београд, 19–30. (D. Krstić, Karakteristika sahranjivanja na nekropoli bronzanog doba u Korbovu, *Zbornik Narodnog muzeja* X–I 1983, Beograd, 19–30).

Krstić 1986 – D. Krstić, Vajuga–Korbovo, *Ђердапске свеске* III 1986, Београд, 148–167. (*Đerdapske sveske* III, Beograd 1986).

Krstić 2003 – Д. Крстић, *Гламија – некропола бронзаног доба у Корбову*, Народни музеј, Београд 2003. (D. Krstić, *Glamija – nekropola bronzanog doba u Korbovu*, Narodni muzej, Beograd 2003).

Lazić 1996 – М. Лазић, *Култура Доња Брњица – генеза, развој и хронологија*, Докторска дисертација одбрањена 1996, Филозофски факултет у Београду, непубликовано. (M. Lazić, *Kultura Donja Brnjica – geneza, razvoj i hronologija,* Doktorska disertacija odbranjena 1996. Filozofski fakultet u Beogradu (Unpublish).

Lazić 1997 – М. Лазић, Жидовар у бронзано доба, у: *Жидовар насеље бронзаног и гвозденог доба*, Ј. Узелац и др. (ур.), Београд–Вршац 1997, 21–38. (M. Lazić, Židovar u bronzano doba, u: *Židovar naselje bronzanog i gvozdenog doba*, J. Uzelac i dr. (ur.) Beograd–Vršac, 21–38).

Lazić 1998 – М. Лазић, Гамзиградска култура – последње откриће Драгослава Срејовића, у: *Рад Драгослава Срејовића на истраживању праисторије централног Балкана*, Н. Тасић (ур.) Крагујевац 1998, 147–158. (M. Lazić, Gamzigradska kultura – poslednje otkriće Dragoslava Srejovića, u: *Rad Dragoslava Srejovića na istraživanju praistorije centralnog Balkana*, N. Tasić (ur.) Kragujevac 1998, 147–158).

Lazić 2004 – М. Лазић, Бор и околина у бронзано доба, у: *Бор и околина у праисторији, антици и средњем веку*, М. Лазић (ур.), Бор–Београд 2004, 102–128. (M. Lazić, Bor i okolina u bronzano doba, u: *Bor i okolina u praistoriji, antici i srednjem veku*, M. Lazić (ur.) Bor–Beograd 2004, 102–128).

Lazić 2010 – М. Лазић, Праисторијска насеља и некрополе у Гамзиграду и његовој околини, у: *Felix Romuliana – Гамзиград*, И. Поповић (ур.), Београд 2010, 21–27. (M. Lazić, Praistorijka naselja i nekropole u Gamzigradu i njegovoj okolini, u: *Felix Romuliana – Gamzigrad*, I. Popović (ur.), Beograd 2010, 21–27)

Lazić 2016 – M. Lazić, Magura – la Nécropole de l'Âge du Bronze à Gamzigrad à l'Est de la Serbie, in: *Funerary practices during the Bronze and Iron Ages in Central and Southeast Europe*, V. Sîrbu at al (eds.), Beograd–Čačak 2015, 29–43.

Lazić, Ljuština 2017 – М. Лазић, М. Љуштина, Поље у селу Глоговац – вишеслојно праисторијско налазиште, у: *Археолошка истраживања на аутопуту Е80*, И.

Продановић-Ранковић (ур.) Београд 2017, 126–157. (M. Lazić, M. Ljuština, Polje u selu Glogovac – višeslojno praistorijsko nalazište, u: *Arheološka istraživanja na autoputu E80*, I. Prodanović-Ranković (ur.), Beograd 2017, 126–157).

Letica 1972 – З. Летица, Гроб Салкуца културе са Лепенског Вира, *Старинар* XXI, 119–122. (Z. Letica, Grob Salkuca kulture sa Lepenskog Vira, *Starinar* XXI 1972, 119–122).

Letica 1975 – З. Летица, Праисторијска некропола „Песак" код Корбова, *Старинар* XXIV–XXV 1975, 163–174. (Z. Letica, Praistorijska nekropola „Pesak" kod Korbova, *Starinar* XXIV–XXV 1975, 163–174).

Leshatkov 2015 – L. Leshtakov, Typology and Chronology of Late Bronze Age and Early Iron Age Bronze Socketed Spearheads in Southeastern Europe, Sofia 2015.

Medović 2007 – P. Medović, *Stubarlija, nekropola naselja Feudvar*, Novi Sad 2007.

Medović, Hansel 1988–1989 – П. Медовић, Б. Хансел, Феудвар код Мошорина – насеље гвозденог и бронзаног доба, Рад војвођанских музеја 31 1988–1989, 21–36. (P. Medović, B. Hansel, Feudvar kod Mošorina – naselje gvozdenog i bronzanog doba, Rad vojvođanskih muzeja 31 1988–1989, 21–36).

Mehofer et al. 2021 – M. Mehofer, M. Gavranović. A. Kapuran, J. Mitrović, A. Putica, Copper production and supra-regional exchange networks – CU-matte smelting in the Balkans between 2000 and 1500 BC, *Journal of Archeological Science* 129 2021, 105378.

Molloy, Milić 2018 – B. Molloy, M. Milić, Wonderful Things? A Consideration of 3D Modelling of Objects in Material Culture Reserach. Open Archaeology 4, 2018, 97–13.

Nikitović, Vasić, Stojić 2002 – L. Nikitović, R. Vasić, M. Stojić, The Mound Necropolis Lugovi–Bent in Mojsinje – excavations in 1997, *Старинар* XLVIII 2002, 123–132.

Nikitović, Vasić, Stojić 2002 – Л. Никитовић, Р. Васић, М. Стојић, *Мојсиње некропола под хумкама из бронзаног и гвозденог доба*, Чачак 2002. (L. Nikitović, R. Vasić, M. Stojić, *Mojsinje nekropola pod humkama iz bronzanog i gvozdenog doba*, Čačak 2002).

Nikolić 2000 – D. Nikolić, Kostolačka kultura na teritoriji Srbije, Beograd 2000.

Nikolić, Kapuran 2001 – Д. Николић, А. Капуран, Слој енеолита и раног бронзаног доба на Благотину, у: *Археолошка налазишта Крушевца и околине*, Н. Тасић и Е. Радуловић (ур.) Крушевац–Београд 2001, 159–172. (D. Nikolić, A. Kapuran, Sloj eneolita i ranog bronzanog doba na Blagotinu, u: *Arheološka nalazišta Kruševca i okoline*, N. Tasić i E. Radulović (ur.) Kruševac–Beograd 2001, 159–172).

Parović-Pešikan 1995 – М. Паровић-Пешикан, Запажања о микенском утицају на подручју западног Балкана, *Старинар* XLV–XLVI, 3–26. (M. Parović-Pešikan, Zapažanja o mikenskom uticaju na području zapadnog Balkana. *Starinar* XLV–XLVI 1995, 3–26).

Peković 2007 – M. Peković, Paraćinska grupa, Beograd 2007.

Popović, Radojčić 1996 – Д. Поповић, Н. Радојчић, *Градина на Босуту*, Шид 1996. (D. Popović, N. Radojčić, *Gradina na Bosutu*, Šid 1996).

Petrović 1984 – J. Petrović, *Gomolava*, Novi Sad 1984.

Petrović 2006 – Б. Петровић, *Калуђерске ливаде – некропола бронзаног доба*, Београд. (B. Petrović, Kaluđerske Livade – nekropola bronzanog doba, Beograd 2006).

Popović 1998 – P. Popović, Problem of cult features in the late Bronze Age cemetery at Konopište, in: *Die Kutlturen der bronzezeit in dem gebeit des Eisernen Tores*, Kolloquium in Drobeta–Turnu Severin, M. Garašanin et al (eds.), Bukarest 1998, 147–153.

Premk, Popović, Bjelajac 1984 – А. Премк, П. Поповић, Љ. Бјелајац, Вајуга – Песак, извештај о сондажним ископавањима у 1980. години, *Ђердапске свеске* II 1984, Београд, 111–124. (A. Premk, P. Popović, Lj. Bjelajac, Vajuga – Pesak, izveštaj o sondažnim iskopavanjima u 1980. Godini, *Đerdapske sveske* II 1984, Beograd, 111–124).

Radojčić 1986 – N. Radojčić, Les fouilles du site „Pesak" a Korbovo en 1981, *Ђердапске свеске* III, Београд, 133–142. (*Đerdapske sveske* III 1986, Beograd, 133–142).

Rašajski, Gačić 1985 – R. Rašajski, Đ. Gačić, Pančevo, Vatrogasni dom – višeslojno praistorijsko nalazište, *Arheološki pregled* 24 1985, Beograd, 14–18.

Reich 2003 – C. Reich, Das Gräberfeld von Szeremle und die Gruppen mit inkrustierter Keramik entalng mittlerer und unterer Donau, Berlin 2006.

Schuster 2003 – C. Schuster, Zur Bestattungsweise in Südrumänien in der Bronzezeit, in: *Burial Customs in the Bronze and Iron Age*, R. Vasić (ur.) Čačak 2003, 109–138.

Srejović 1960 – D. Srejović, Praistorijska nekropola u Donjoj Brnjici. Glasnik Priština IV–V 1960, 83–135.

Srejović, Lazić 1997 – Д. Срејовић, М. Лазић, Насеља и некрополе бронзаног доба у Тимочкој крајини, у: *Археологија источне Србије*, М. Лазић (ур.), Београд 1997, 225–244. (D. Srejović, M. Lazić, Naselja i nekropole bronzanog doba u Timočkoj Krajini, u: *Arheologija istočne Srbije,* M. Lazić (ur.) Beograd 1997, 225–244).

Stojić 1980 – М. Стојић, *Старе културе и народи на тлу Поморавља*, Јагодина 1980. (M. Stojić, *Stare kulture i narodi na tlu Pomoravlja*, Jagodina 1980).

Stojić 1986 – M. Stojić, *Gvozdeno doba u basenu Velike Morave*, Beograd–Svetozarevo 1986.

Stojić 1986a – М. Стојић, Праисторијско насеље Вецина Мала у Мајуру код Светозарева, *Старинар* XXXVII 1986, 145–151. (M. Stojić, Praistorijsko naselje Vecina Mala u Majuru kod Svetozareva, *Starinar* XXXVII 1986, 145–151).

Stojić 1989 – М. Стојић, Праисторијско налазиште Ђула у Остриковцу код Светозарева, *Balcanica* XX 1988, 171–189. (M. Stojić, Praistorijsko nalazište Đula u Ostrikovcu kod Svetozareva, *Balcanica* XX 1988, 171–189).

Stojić 1994 – M. Stojić, Le bassin de la Morava entre 1200 et 700 avant J.C., in: *The Early Halsstatt period (1200–700 BC) in South – Eastern Europe*, H. Cigudean and N. Boroffka (eds.) Alba Iulia 1994, 219–230.

Stojić 1998 – М. Стојић, Културни хоризонт ватинске културне групе у Србији јужно од Саве и Дунава: Мојсиње–Добрача, у: *Рад Драгослава Срејовића на истраживању праисторије централног Балкана*, Н. Тасић (ур.) Крагујевац 1998, 133–146. (M. Stojić, Kulturni horizont vatinske kulturne grupe u Srbiji južno od Save i Dunava: Mojsinje–Dobrača, u: *Rad Dragoslava Srejovića na istraživanju praistorije centralnog Blakana*, N. Tasić (ur.) Kragujevac 1988, 133–146).

Stojić 2000 – M. Stojić, The Brnjica cultural group in the South Morava Basin: Genesis, development and chronology, *Старинар* L 2000, 9–59.

Stojić, Čađenović 2006 – М. Стојић, Г. Чађеновић, *Крушевац, културна стратиграфија праисторијских локалитета у зони састава Западне Мораве и Јужне Мораве*, Београд–Крушевац 2006. (M. Stojič, G. Čađenović, *Kruševac, kulturna stratigrafija praistorijskih lokaliteta u zoni sastava Zapadne Morave i Južne Morave*, Beograd–Kruševac 2006).

Şandor-Chicideanu 2003 – M. Şandor-Chicideanu, Cultura Žuto Brdo–Garla Mare. Contribuţii la cunoaşterea epocii bronzului la Dunărea Mijlocie şi Inferioară, Cluj–Napoca 2003.

Szentmiklosi 2009 – A. Szentmiklosi *Aşezările culturii Cruceni–Belegiš în Banat*, PhD Thessis, Alba Iulia 2009, Unpublish.

Tasić 1965 – Н. Тасић, Остаци некрополе параћинске групе код Маћије, *Старинар* XIII–XIV 1965, 187–191. (N. Tasić, Ostaci nekropole paraćinske grupe kod Maćije, *Starinar* XIII–XIV 1965, 187–191).

Tasić 1972 – N. Tasić, „Die Pannonische Tiefebene und der Zentralbalkan am Übergang von der Mittleren in die späte Bronzezeit“, *Balcanica* III 1972, 93–115.

Tasić 1974 – N. Tasić, Bronzano doba, u: *Praistorija Vojvodine*, B. Brukner at al (eds.), Novi Sad 1974, 185–258.

Tasić 1983 – Н. Тасић, *Југословенско подунавље од индоевропске сеобе до продора Скита*, Нови Сад – Београд 1983. (N. Tasić, *Jugoslovensko Podunavlje od indoevropske seobe do prodora Skita*, Novi Sad – Beograd 1983).

Tasić 1984 – Н. Тасић, Насеље ватинске културе, у: *Винча у праисторији и средњем веку*, С. Ћелић (ур.), Београд 1984, 76–83. (N. Tasić, Naselja vatinske kulture, u: *Vinča u praistoriji i srednjem veku*, S. Đelić (ur.), Beograd 1984, 76–83).

Tasić 1991 – Н. Тасић, Значај Параћин културе у развоју бронзаног и старијег гвозденог доба централне и јужне Србије, *Старинар* XL–XLI 1991, 121–126. (N. Tasić, Značaj Paraćinske kulture u razvoju bronzanog i starijeg gvozdenog doba centralne i južne Srbije, *Starinar* XL–XLI 1991, 121–126).

Tasić 2001 – Н. Тасић, Праисторијске културе и налазишта на подручју Крушевца, у: *Археолошка налазишта Крушевца и околине*, Н. Тасић и Е. Радуловић (ур.) Крушевац–Београд 2001, 7–20. (N. Tasić, Praistorijske kulture i nalazišta na području Kruševca, u: *Arheološka nalazišta Kruševca i okoline*, N. Tasić (ur.), Kruševac–Beograd 2001, 7–20)

Tasić 2002 – Н. Тасић, Некропола у Белегишу и проблем белегишке културе, у: С. Вранић, *Белегиш, Стојића Гумно – некропола спаљених покјника*, Београд 2002, 169–184. (N. Tasić, Nekropola u Belegišu i problem belegiške kulture, u: S. Vranić, *Belegiš, Stojića gumno – nekropola spaljenih pokojnika*, Beograd 2002, 169–184).

Todorović 1977 – J. Todorović, *Praistorijska Karaburma* II, Muzej grada Beograda, Beograd 1977.

Todorović, Simović 1959 – Ј. Тодоровић, А. Симовић, Праисторијска некропола у селу Рутевац код Алексинца, *Старина*р IX–X 1959, 267–271. (J. Todorović, A. Simović, Praistorijska nekropola u selu Rutevac kod Aleksinca, *Starinar* IX–X 1959, 267–271).

Trbuhović 1961 – В. Трбуховић, Из праисторије долине Ресаве, *Старинар* XI (1960), 181–184. (V. Trbuhović, Iz praistorije doline Resave, *Starinar* XI (1960), 181–184).

Trogmayer, Sekereš 1965 – O. Trogmayer, L. Sekereš, Prilog istoriji kasnog bronzanog doba, *Rad muzeja Vojvodine* 15 1965, 17–29.

Vasić 1952/1953 – М. М. Васић, Кличевачка некропола, *Старинар* III–IV, Београд, 1–16. (M. M. Vasić, Kličevačka nekropola, *Starinar* III–IV, 1–16).

Vasić 1997 – Р. Васић, Белешке о бронзаном добу у Србији, *Зборник радова Народног музеја у Чачку* XXVII 1997, 37–48. (R.Vasić, Beleške o bronzanom dobu u Srbiji, *Zbornik Narodnog muzeja u Čačku*, 37–48).

Vasić 2003 – R. Vasić, Die Nadeln im Zentralbalkan, *PBF* XIII, Band 11, Stuttgart 2003.

Vasić 2009 – R. Vasić, Die Lanzen- und Pfeilspitzen im Zentralbalkan, *PBF* V, Band 8, Stuttgart 2009.

Vasić 2013 – R. Vasić, Cremation burials in the Morava valley between 1300 and 750 BC, in: *Cremation burials in the region between the Middle Danube and the Aegean, 1300–750 BC*, M. Lochner and F. Ruppenstein (eds.) Wien 2013, 173–184.

Vranić 2002 – С. Вранић, Белегиш, *Сшојића Гумно – некройола сйаљених йокојника*, Београд 2002. (S. Vranić, Belegiš, *Stojića Gumno – nekropola spaljenih pokojnika*, Beograd 2002).

Vukmanović 1983 – М. Вукмановић, Нови налази фибула типа „Peschiera " на Ђердапу, *Зборник Народнoī музеја* XI 1983, 43–48. (M. Vukmanović, Novi nalazi fibula tipa „Peschiera" na Đerdapu, *Zbornik Narodnog muzeja* XI 1983, 43–48).

Waterbolk 1988 – H. T. Waterbolk, C^{14}-Datirungen von Gomolava (C^{14} Datovanja sa Gomolave), in: *Gomolava* I, N. Tasić and J. Petrović (eds.) Novi Sad 1988, 117–121.

Резиме: АЛЕКСАНДАР КАПУРАН, Археолошки институт, Београд
МАРИО ГАВРАНОВИЋ, Археолошки институт, Беч
ИГОР ЈОВАНОВИЋ, Музеј рударства и металургије, Бор

САХРАЊИВАЊЕ У СЛИВОВИМА МОРАВЕ, ТИМОКА И НИШАВЕ ТОКОМ БРОНЗАНОГ ДОБА

Кључне речи. – Централни Балкан, бронзано доба, сахране, кремација, погребни ритуал, урне, апсолутни датуми

Захваљујући резултатима истраживања током последње деценије, и апсолутним датумима, као и резултатима стилско-типолошких анализа керамике из гробова спаљених покојника, покушали смо да презентујемо ново виђење генезе бронзаног доба у Србији јужно од Саве и Дунава с једне и западног Поморављa и Понишављa с друге стране. Прве радове и мишљења у вези са овом проблематиком потичу од наших уважених колега као што су академици Б. Јовановић и Д. Срејовић, као и од колеге М. Лазића.

Мада је на територији између Дунава, Саве, Западне Мораве и долине Нишаве, постојала извесна културна цензура током раног бронзаног доба, у средњем и позном бронзаном добу ситуација се знатно мења, нарочито на примеру некропола са спаљеним покојницима. Сматрамо да разматрања о транзицији из Бубањ – Хум III у Бубањ – Хум IV – Јуљаци културу у Поморављу, које су представили А. Булатовић и Ј. Станковски, на темељан и аргументован начин презентују процес преласка из раног у средње бронзано доба на територији јужног Поморавља, Тимочке Крајине и централне Србије. На основу нових резултата апсолутних датума, популације које насељавају Тимочку Крајину и околину Бора кремирају своје покојнике и урне похрањују унутар кружних камених конструкција већ на прелазу из III у II миленијум пре н. е. Сматрамо да овакав погребни ритуал има одређене подударности са погребним ритуалом практикованим на некрополи у Ранутовцу код Врања (јужна Србија), али и са сличним гробним конструкцијама откривеним у северној Грчкој, што би могло да указује на постојање извесног балканског феномена некропола са спаљеним покојницима и архитектуром у виду кружних камених конструкција који се јавља на почетку II миленијума пре н. е., о чему ће још бити речи.

Треба нагласити да у исто време, у централном Поморављу и Шумадији до данас нису откривени гробови раног и средњег бронзаног доба. Могуће је да су географски изоловане и затворене заједнице које експлоатишу бакар у околини Бора тек након три-четири века почеле са ширењем културних утицаја у правцу југа и запада, односно ка долинама Црног Тимока и Велике Мораве, где се отприлике средином II миленијума пре н. е. формирају заједнице које праве скоро исту керамику и негују сличне праксу сахрањивања са кружним каменим конструкцијама уз присуство локалних карактеристика. Судећи и према репертоару налаза и према новим апсолутним датумима, некропола Мађилка могла би се посматрати у контексту ширења ових утицаја из североисточне Србије ка долинама Мораве и Нишаве. Истовремено се међу археолошким материјалом могу препознати и други утицаји који долазе од осталих културних центара средњег бронзаног доба.

У утицајима који долазе са севера најбоље сведочи ватински пехар са Бањске стене који показује све карактеристике хоризонта Јуљаци III. Утицаји који стижу од Хугелграбер и Белегиш I култура са запада такође се срећу на керамици на Магури (гроб 40 и још једна урна без ознаке на Магури). Одређени утицаји долазе и из правца североистока, односно од културе Вербициоара (урна из гроба 63 на Магури и посуда са Бањске стене). Идентитетске особености, као и извесни космополитизам заједница концентрисаних у непосредној околини некрополе на Магури, огледају се у различитим декоративним стиловима на утилитарној и погребној керамици. Јединствене погребне обичаје свакако представљају декорисане камене плоче којима су урне на Магури биле поклопљене, а присутан је и већи број металних налаза у гробовима него што је то био случај у околини Бора. Промене погребног ритуала у односу на некрополе у околини Бора можемо повезати са повољнијом географском позицијом, будући да се Магура и Бањска стена налазе у централној зони долине Црног Тимока, која се пружа у правцу исток–запад и спаја централни са источним Балканом.

Теорија Д. Срејовића и М. Лазића како су гробне конструкције заједно са урнама на некрополи Магура представљале јединствен случај била је значајна у време када је Магура откривена (1994–1996), али су нова открића утицала да се ово мишљење промени. Основни разлог за ове промене у првом реду представљају нови апсолутни датуми који јасно указују да су некрополе код Бора старије од некрополе на Магури и да погребни ритуални на некрополама из бронзаног доба у Тимочкој Крајини имају извесне подударности са истовременим некрополама у сливу јужне Мораве (Ранутовац), а можда и са неким некрополама даље ка југу Балканског полуострва. Претпоставка да су дршке моделоване у виду чашице јединствена појава на територији Тимочке Крајине такође не стоји, будући да оне ипак постоје и у другим културама средњег и позног бронзаног доба у географски блиским областима на истоку и североистоку, као што на једном месту М. Лазић наводи. Због тога сматрамо да је термин гамзиградска култура исправно користити само у оквирима микрорегије која обухвата десну обалу Црног Тимока, али искључиво током касног бронзаног доба, и да самим тим тај термин није адекватан за дефинисање целокупне културе

бронзаног доба у североисточној Србији. На основу спроведених истраживања и C14 датума сада је сигурно да на територији Тимочке Крајине у бронзаном добу постоје две фазе. Старија фаза (прва половина II миленијума) у којој насеља и некрополе више гравитирају у околини Бора, док млађу фазу (друга половина II миленијума) представљају насеља и некрополе формиране у области атара села Гамзиград, настале под утицајима који долазе са севера (Бор), из Поморавља са запада и из правца Олтеније са североистока, и да је њихова симбиоза изнедрила један стил који се најјасније одражава на облицима и декорацији урни на некрополи Магура.

Апсолутни датуми из гробова у урнама на некрополама Рајкинац и Глождар, које припадају параћинској групи, свакако ће допринети бољем сагледавању међусобних односа популација из бронзаног доба са некрополама спаљених покојника на централном Балкану. Апсолутни датуми са ових локалитета који се крећу у оквиру од краја 15. до 13. века пре н. е. показују да се ради о знатно млађим некрополама од оних у североисточној Србији (Трњане, Борско језеро, Киваљски Камен и Хајдучка чесма) које се датују у период између 20. и 17. века пре н. е. У погледу културне интерпретације, вреди споменути да је раније некропола Трњане сврставана у контекст налазишта параћинске групе, али сада знамо да је она много старија.

Што се тиче апсолутног датума са локалитета Медошевац, где је под нејасним околностима пронађен сет бронзаног накита типичног за културу гробних хумки, као и неколико скелетних укопа те гробова у урнама, апсолутни датум из спаљених остатака једног гроба сугерише како је на овом месту током кратког пробоја културе гробних хумки постојала и млађа некропола из позног бронзаног доба, односно транзиционог периода из бронзаног у гвоздено доба, што је свакако занимљив податак у смислу односа појединих културних манифестација на простору јужне Србије.

UDC: 903.5"637"(497.11)
https://doi.org/10.2298/STA2272073F
Original research article

VOJISLAV FILIPOVIĆ, Institute of Archaeology, Belgrade
ALEKSANDAR BULATOVIĆ, Institute of Archaeology, Belgrade
RADA GLIGORIĆ, Museum of Jadar, Loznica

MOUND 28 FROM THE PAULJE NECROPOLIS IN BREZJAK. A CONTRIBUTION TO THE ABSOLUTE CHRONOLOGY OF THE LATE BRONZE AGE IN SERBIA

e-mail: vfilipov1@gmail.com

Abstract. – The paper brings the results of archaeological excavations of Mound 28 at the Paulje necropolis, conducted in the autumn of 2019, along with the excavations of two adjacent mounds. All of the aforementioned mounds were partially damaged and eroded through decades of ploughing. Consequently, remains of a Late Bronze Age burial were recorded solely in Mound 28. According to the grave inventory comprised of bronze jewellery and analogies from concurrent necropolises, it is assumed that the burial belongs to a female individual (?). Besides the extraordinary examples of bronze jewellery, such as pins, an arm ring, bracelets, crescent-shaped pendants, torques, and remains of amber jewellery, the organic substructure below the fully cast arm ring has been successfully dated. According to the absolute dating, the jewellery is attributed to the 14th century BC, and the inventory of the grave completely corresponds to the previously dated features from the Paulje necropolis. Therefore, certain forms of bronze jewellery were provided with a more precise chronological position based on the absolute dates. The burial is attributed to the Brezjak culture.

Key words. – Late Bronze Age, Paulje, mound 28, absolute chronology, AMS dates, bronze jewellery, amber

The village of Brezjak is located approximately 12 northeast of Loznica. At the end of the 19th century, the pioneer of Serbian archaeology, Professor Mihailo Valtrović, recorded a large mound necropolis on the left bank of the small Korenita river, at a location called Panića Zabran, in the village of Brezjak (Fig. 1). The locals later renamed the location Paulje, based on a specific sort of grass that grew in fields surrounding the aforementioned location of Panića Zabran. The first excavations were conducted in 1892, when M. Valtrović registered a total of 27 mounds.[1] He excavated a total of six mounds, yet points out that three mounds were previously excavated by a local tavern owner Milinko, on behalf of Mr. Sima Trojanović. All of the deceased recorded on that occasion were incinerated and their remains were laid in ceramic urns, which are unfortunately only described by M. Vatrović, without any accompanying illustrations.[2] Nowadays, the site of Paulje represents the most researched mound necropolis in north-western Serbia, with a total of 48 completely excavated mounds since 1989. This number rises to 57 mounds if those excavated by M. Valtrović and S. Trojanović during the 19th century are accounted for as well.

The renewed archaeological excavations at the site were started in 1989, following the founding of the Museum of Jadar in Loznica.[3] Museum archaeologists, in collaboration with the Institute for the Protection of Cultural Monuments in Kragujevac,[4] have excavated mounds A (1) and Б (2). In the 1990, mounds Ц (3), Д

[1] Валтровић 1893, T. XVI, скица II, план 3.

[2] Валтровић 1893, 84 and further.

[3] Глигорић, Цанић-Тешановић 2010; Глигорић 2014; Булатовић *et al.* 2017: 116 and further.

[4] Newly formed Institute for the Protection of Cultural Monuments Valjevo took over the territorial jurisdiction in the protection of archaeological heritage at the beginning of the 90s.

Manuscript received 24th February 2022, accepted 27th October 2022

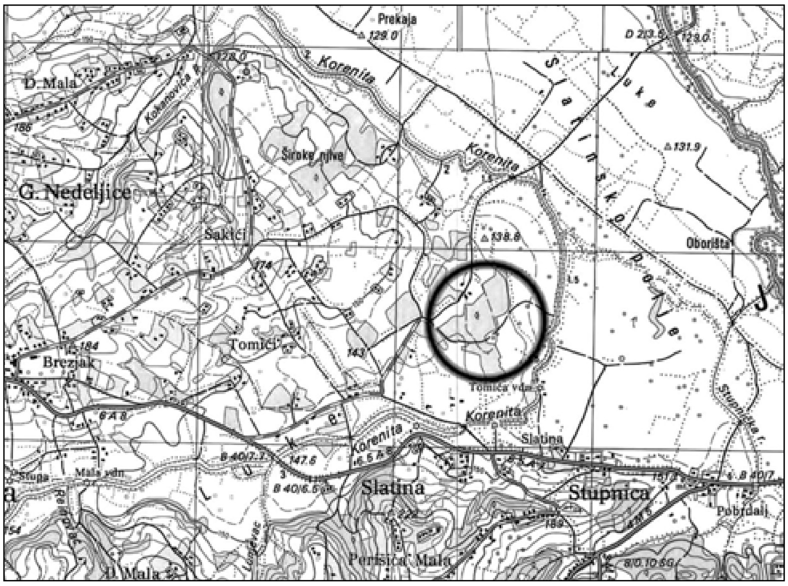


Fig. 1. Position of the site on topographic map (scale 1:25.000)

Сл. 1. Положај локалитета на топографској карти 1 : 25.000

(4), and Е (5) were excavated, mounds Ф (6) and Г (7) in 1995, and mound Х (8) in 1997.[5] Mounds И (9) and Ј (10) were excavated in 1998, mound К (11) in 2000, mounds Л (12) and М (13) in 2001, mound Н (14) in 2002, and mound О (15) in 2004. In 2010 and 2011 mounds П (16), Р (17), and С (18) were excavated. Between 2012 and 2015 mounds 19 to 27 were excavated,[6] and mounds 28 to 48 between 2019 and 2021.

All of the mounds were formed by soil backfilling, and the remains of the original covers made of small stones or pebbles, or their combination, were preserved on only a few mounds. The mounds measure a diameter between 10 and 30 m, and the preserved heights vary between 0.5 and 3 m. The necropolis is comprised of several small groups of mounds that are often separated by several dozen meters. Originally, a total of approximately 30 mounds were registered, yet the additional prospection indicated that their number could easily surpass 60. Namely, in the past 10 years, complex LiDAR scans and geophysical measurements of the wider area of Pauje have been conducted.[7] This resulted in the discovery of a large number of low mounds distributed throughout the fields surrounding the necropolis, which were, due to the decades of mechanical ploughing, almost indiscernible during on-foot surveys.

Archaeological excavations of Mound 28

Based on the LiDAR scans from 2018/2019, three anomalies that represented the remains of eroded prehistoric earthen mounds were recorded in ploughland next to the forest. The diameters of the mounds measured up to 15 m, and the preserved heights were up to 0.5 m (Fig. 2).[8] The most preserved mound was marked with the number 28, the eastern one with the number 29, and the one farthest to the east with the number 30, although its state of preservation posed a dilemma as to whether it represents a mound. In Fig. 2 it can be seen that those three mounds were within a group of 10 mounds in the western portion of the Paulje necropolis, and another, one of the largest mounds in the necropolis, can be seen further to the north. In 1998, mound И (9) was excavated in the forest north of mound 29, as clearly seen on the LiDAR scan.[9] Mounds 28 and 29 slightly lean against each other with their peripheral parts, although originally a

[5] Мадас 1990; Цанић-Тешановић, Глигорић 2001.

[6] Alphabetical naming of mounds was abandoned in 2012, and ordinal numbers were adopted, since it was determined that the number of mounds is far higher than previously considered. Булатовић *et al.* 2017: 117.

[7] The scans were financed by Rio Sava D.O.O from Belgrade, as a part of preparations for the construction of a mine in this area.

[8] Cadaster parcel No. 399, K.O. Slatina, formerly owned by Luka Madžarević from Brezjak. The archaeological excavations were conducted in October 2019, under the organisation of the Museum of Jadar in Loznica and the financial support of Rio Sava D.O.O. from Belgrade. The excavations were directed by Rada Gligorić, museum advisor of the Museum of Jadar, with the participation of A. Bulatović and V. Filipović from the Institute of Archaeology in Belgrade.

[9] Цанић-Тешановић, Глигорић 2001.

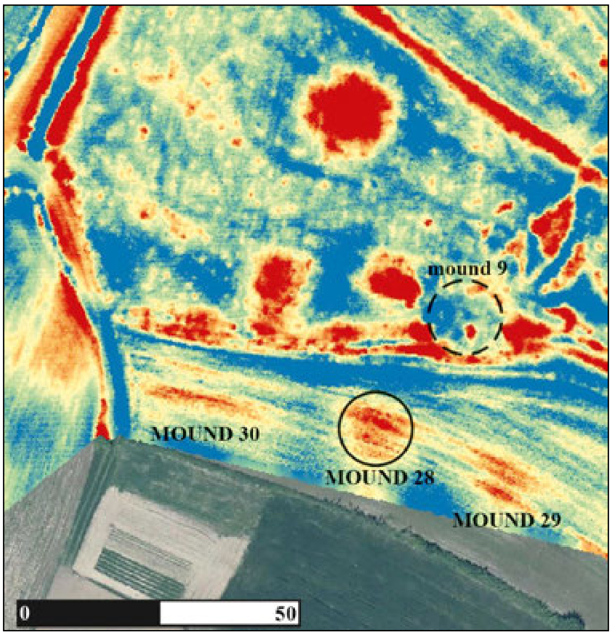




Fig. 2. LiDAR scan of a part of the necropolis from 2018/2019
Fig . 4. Orthophoto of the trench in mound 28

Сл. 2. ЛИДАР снимак дела некрополе из 2018/19. године
Сл. 4. Ортофото рова у хумци 28

free space had to have existed between them. Even though all of the mounds were quite poorly preserved and eroded by agricultural works, the archaeological excavations have demonstrated that the degree of preservation of archaeological material and features within mound 28 is extremely satisfying. On the other hand, only scarce traces of potential burial rituals with a small number of dislocated finds were recorded within mounds 29 and 30.

Mound 28 was detected within a diameter of approximately 12 m and with a preserved height of up to 0.5 m. The excavations were conducted by the removal of opposite segments without cross-sections. The entire mound was separated into 4 approximately equal segments according to the north-south and east-west axes. The opposite segments were excavated by mechanical layers in order to provide a fine stratigraphic profile and document the maximal original size of the mound.

The stratigraphy was uniform within the entire mound. The layer of 0.25 m thick light brown plough soil was followed by a layer of yellowish-brown compact soil, which represented the original backfill of the mound, with a thickness of between 0.05 m in peripheral parts to 0.4 m in central parts of the mound. Below, a layer of specific light-grey virgin soil with brownish and yellowish concretions was recorded (Fig. 3). It should be highlighted that the decades of ploughing significantly disturbed the original stratigraphy of the mound and drastically lowered it, as the archaeological material was occasionally recorded at the bottom of furrows. Therefore, certain examples of jewellery were dislocated and fragmented, while certain examples

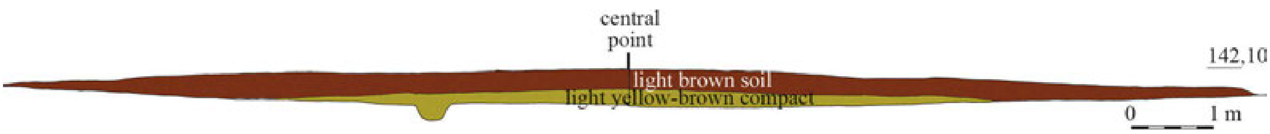


Fig. 3. Drawing of the cross-section of mound 28 on the north-south axis

Сл. 3. Цртеж профила хумке 28 по оси С–Ј



Fig. 5. Oval zone of grey soil that contained most of the bronze jewellery (grave 1?)

Сл. 5. Овална зона нешто сивкастије земље у којој је откривен највећи број бронзаног накита (гроб 1?)





Fig. 6. Lavishly decorated bronze arm ring on organic base, photo in situ
Fig. 7. Zone of hard soil with the remains of burnt bones and amber beads

Сл. 6. Раскошно украшена бронзана гривна откривена на органској подлози, снимак in situ
Сл. 7. Зона тврде земље са остацима горелих костију и ћилибарских перлица

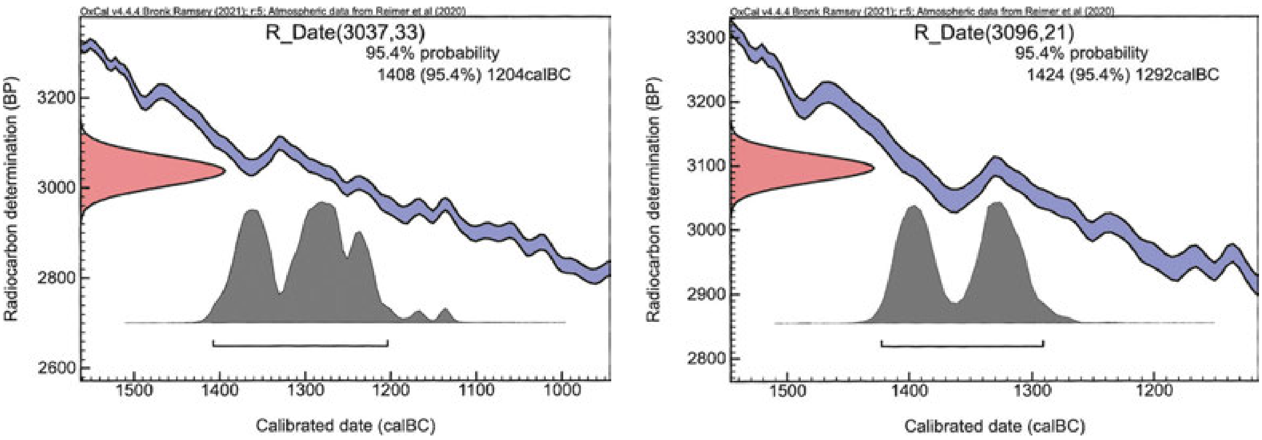


Fig. 8. Dates acquired from the analysis of the organic base on which the bronze arm ring was laid

Сл. 8. Дашуми добијени на основу анализе органске подлоге на коју је била положена бронзана гривна

might be missing from a presumed original set of jewellery. This is indicated by the fact that only a few potsherds were recorded within the mound. Those potsherds could have belonged to vessels that are often found within mound burials at the necropolis and could have been destroyed by agricultural works due to their higher position within the mound. A trench measuring a length of approximately 7 m, and a width of approximately 0.5 m, was recorded in the base of segments B and C. The average depth of the trench was 0.3 m (Fig. 4). Almost all of the bronze finds that could belong to a specific Late Bronze Age set of jewellery were recorded either in the trench or in its surroundings. An oval zone (grave 1?) was recorded in segment C, in the approximate centre of the aforementioned trench. The zone was characterised by dark-grey soil covering an irregular area with dimensions of 1.35 x 1 m (Fig. 5). The highest number of bronze objects was recorded within this zone – a lavishly decorated ellipsoid bronze arm ring with open ends was recorded on an organic base (Fig. 6),[10] at least two spirally twisted bracelets made of thick bronze wire, several crescent-shaped pendants or their fragments, and a piece of a very large and lavishly decorated bronze torque. Within the western portion of the trench, some 2 m from the aforementioned zone, a thin bronze torque was recorded, and several bronze objects have been recorded some 1 to 1.5 towards the eastern portion of the trench – two bronze pins and a fragment of a faceted crescent-shaped pendant. A circular zone that contained the remains of carbonised wood and amber beads, with a diameter of less than 10 mm, damaged by direct exposure to fire (Fig. 7),[11] was recorded in segment B, approximately 2.5 m north of the trench.

Smaller areas with carbonised wood and burnt soil were recorded in three spots within the mound, although their connection with the aforementioned grave 1 (?) and the zone with amber beads could not be determined. However, such zones are common with mounds at the Paulje necropolis and most likely represent the remains of the burial ritual practiced during the formation of the mounds. However, their nature, function, and connection with graves cannot be determined with the current state of research.[12]

Catalogue of finds

As previously noted, a large amount of bronze jewellery was recorded within the mound, as well as fragmented pieces that could not by typologically characterised, amber beads, and several potsherds.

---

[10] Two AMS dates presented in this paper originate from this organic matter.

[11] Due to the extreme hardness of this circular zone and the decay of beads, the entire block was cut out and transferred to the Museum of Jadar, to separate the beads in controlled conditions with the careful removal of soil with precise tools. Unfortunately, the beads fell apart during the removal of the surrounding soil and, therefore, their number and type remain unknown.

[12] It remains unclear whether this represents a partial burning of the planned base of the mound with accompanying specific rituals, or possibly the transfer of parts of the funeral pyre in the area of the planned mound, since remains of complete pyres have been recorded solely in several of the 48 mounds at the Paulje necropolis.

1. Central fragment of a large body, possibly of a bronze pin (?), covered with noble patina. Dimensions: 42 x 4 mm. Bronze, casting. Segment C, mechanical layer 2, plough soil, find No. C-1. (Pl. I/1)

2. Fragment of a damaged bronze bracelet with an oval cross-section and possibly opened ends. Incised complex ornament, covered with azurite patina. The middle of the bracelet is decorated with a motif comprised of six concentric circles and two oblique bands filled with parallel incisions that start from the outermost circle. The outer sides of the bands are flanked by lines comprised of a row of small punctures. The bands connect with other concentric circles, of which only one is partially visible, yet such a motif, or one of its variations, represents a common composition on bracelets, arm rings, and torques from the Late Bronze Age, especially from the Paulje necropolis. Dimensions: 73 x 42 mm. Bronze, casting, incising. Segment A, mechanical layer 2, plough soil, find No. C-2. (Pl. I/2)

3. Completely preserved ellipsoid bronze arm ring with opened ends, lavishly decorated with oblique parallel lines, visually separated into 10 sections by the opposite orientation of lines within the sections. The open ends are decorated with parallel lines in line with the flat ends. The inner side of the arm ring is separated from the ornament by an incised line and is undecorated. The arm ring is covered with a noble patina. This type of jewellery usually comes in pairs; therefore, one of the arm rings may be missing from the original set of jewellery.[13] Dimensions: 113 x 98 x 10 mm. Bronze, casting, incising. Segment C, mechanical layer 3, zone of grave 1 (?), find No. C-3. (Pl. I/3).

4. Thin bronze torque with flat ends, partially decorated with a row of parallel lines, with no regularities. The object is well preserved, slightly bent, and missing one end. It is made of bronze wire with a circular and rectangular cross-section. It was recorded within the easternmost end of the trench and most likely dislocated from the original position. Length: 200 mm, wire thickness: 2–4 mm. Bronze, incising. Segment C, mechanical layer 3, find No. C-4. (Pl. I/4).

5. Poorly preserved fragment of a bracelet made of spirally twisted bronze wire with an oval cross-section, covered in noble patina. The object was recorded in the trench, although within the oval zone (grave 1?). Bronze. Segment C, mechanical layer 3, find No. C-5. (Pl. I/5).[14]

6. Three fragments of a thick bronze pin with a circular cross-section, covered in patina, possibly a part of pin cat no. 12, 14, and 15. Recorded within the trench, in the oval zone. Bronze, casting. Segment C, mechanical layer 4, find No. C-6. (Pl. I/6).

7. Fragmented bracelet made of spirally twisted profiled wire with a triangular cross-section, with noble patina. Recorded within the trench, in the oval zone. Bronze. Segment C, mechanical layer 4, find No. C-7. (Pl. I/7).

8. Fragmented large crescent-shaped pendant, high quality cast, covered in noble patina. The lower portion of the central rung and inner branched part are missing. The back of the ring is modelled by twisting the upper part of the plate. It was recorded within the trench, in the oval zone, and possibly made from the same mould as Cat. No. 9. Dimensions: 41 x 42 mm. Bronze, casting. Segment C, mechanical layer 4, find No. C-8. (Pl. I/8)

9. Fragmented large crescent-shaped pendant, high quality cast, covered in noble patina. The lower portion of the central rung and inner branched part are missing. The back of the ring is modelled by twisting the upper part of the plate. It was recorded within the trench, in the oval zone, and possibly made from the same mould as Cat. No. 8. Dimensions: 43 x 42 mm. Bronze, casting. Segment C, mechanical layer 4, find No. C-9. (Pl. I/9)

10. Fragment of a thick bronze torque with twisted end, covered in noble patina. It is decorated with a field below the twisted end, filled with incised parallel lines, followed by an empty field, and a field with incised lines, and again an empty field and field with lines. At the end, there is a framed field with an incised motif of the number 8, which repeats four times. This ornament is enhanced by a punctuated band that follows its contours. This motif is followed by another field with incised parallel lines. It seems as if the object was intentionally broken in this place during the Bronze Age, as most of the torque was not recorded within the mound. The end of the torque was recorded approximately at the bottom of the trench, in the oval zone. It seems as if the torque was purposely broken during the burial, as most of its parts were not recorded within mound 28. Dimensions: 62 x 9–12 mm. Bronze, casting, incising, puncturing. Segment C, the bottom of the trench, find No. C-10. (Pl. II/10)

---

[13] The find was either dislocated by agricultural works or taken during the formation of the trench in the mid-20th century. This will be further discussed in the concluding remarks.

[14] Since the object is still undergoing the conservation process, the plate represents the type of find, not the original find.

11. Fragmented large crescent-shaped pendant with patina. The lower portion of the central rung and inner branched part are missing. The back of the ring is modelled by twisting the upper part of the plate. It was recorded within the trench, in the oval zone, and it is quite similar to Cat. No. 8 and Cat No. 9. Dimensions: 39 x 43 mm. Bronze, casting. Segment C, mechanical layer 4, find No. C-11. (Pl. II/11)

12. Fragment of a poorly preserved thick pin with a circular cross-section, covered in patina. It could represent a part of Cat. No. 6 and Cat. No. 15. Also recorded within the trench, out of the oval zone. Dimensions: 59 x 3 mm. Bronze, casting. Segment B, mechanical layer 1 find No. C-12. (Pl. II/12)

13. A massive chipped stone blade made of black stone, retouched from both the ventral and the dorsal side. Dimensions: 60 x 25 x 13 mm. Segment C, mechanical layer 2, find No. C-13. (Pl. II/13)

14. Small fragment of thick bronze wire or a part of a pin. Possibly connected with Cat. No. 6, 12, and 15. Dimensions: 20 x 3 mm. Bronze, casting. Segment B, mechanical layer 2, find No. C-14. (Pl. II/14)

15. Upper portion of a large bronze pin with a nail-shaped head and two thickenings on the neck. Decorated with grooves, covered in azurite patina. Possibly connected with Cat. No. 6, 12, and 14. Recorded within the trench, outside the oval zone. Length: 77 mm, head diameter: 1.1 mm. Bronze, casting, Segment B, find No. C-15. (Pl. II/15)

16. Fragment of a crescent-shaped pendant. Approximately one-third of the object is preserved – a portion of the central rung and inner branched part. The pendant has two facets and different patina, which distinguishes it from other crescent-shaped pendants recorded within the trench, and which are most likely made in the same mould. Recorded within the trench, outside the oval zone. Dimensions: 19 x 17 mm. Bronze, casting. Segment B, find No. C-16. (Pl. II/16)

17. Pin with stamp-shaped head and circular cross-section, deformed in several spots, covered in patina. Close to the pin head, the body is thicker and rectangular in cross-section. Recorded within the trench, out of the oval zone. Length: 240 mm, head diameter: 20 mm, body thickness: from 2 to 5 mm. Bronze, casting. Segment B, find No. C-17. (Pl. II/17)

18. Several amber beds with a diameter below 10 mm. Recorded within compact soil, approximately 2.5 m north of the eastern portion of the trench. The beads are damaged by fire and their exact number remains unknown. Segment B, find No. C-18. (Fig. 7).

19. Fragment of bronze wire with a circular cross-section, covered in noble patina, recorded within the plough layer. Dimensions: 43 x 2 mm. Bronze. Segment D, mechanical layer 1, find No. C-19. (Pl. II/18)

20. Fragment of bronze wire with a circular cross-section, covered in noble patina, recorded within the plough layer. Dimensions: 48 x 2 mm. Bronze. Segment D, mechanical layer 1, find No. C-20. (Pl. II/19)

21. Fragment of bronze wire with a circular cross-section, covered in noble patina, recorded within the plough layer. Dimensions: 89 x 2 mm. Bronze. Segment D, mechanical layer 1, find No. C-21. (Pl. II/20)

22. Fragment of bronze wire with a circular cross-section, covered in noble patina, recorded within the plough layer. Dimensions: 94 x 2 mm. Bronze. Segment D, mechanical layer 1, find No. C-22. (Pl. II/21)

23. Fragment of bronze wire with rectangular cross-section, covered in noble patina, recorded within the plough layer. It is possible that pieces Cat. No. 19–23 belong to one object, which was, due to ploughing, destroyed or eroded, considering that the dimensions of the cross-section of all of the pieces are identical and that the patina is also identical. Dimensions: 32 x 2 mm. Bronze. Segment D. mechanical layer 1, find No. C-23. (Pl. II/22)

Analogies and AMS dates

Finds from mound 28 could represent the inventory of one, or possibly two graves. The inventory itself positions this mound as one of the richest mounds from the Paulje necropolis. It seems as if the finds might represent a set of jewellery of a rich female grave, and within that context would correspond to the richest funeral at the necropolis, the central grave of mound K.[15] Regarding the analogies, a short note of typologically characteristic pieces will be provided, within the scope of regional analogies.

Pin with a stamp-shaped head (Cat No. 17), without decoration, is, according to R. Vasić, positioned into the Br C period in the Central Balkans. Within the Central European context, this type of pin is considered slightly older, connected with the Hügelgräber horizon.[16] Essentially, based on the manner of production, the pin resembles examples with a nail-shaped head, due to the lack of ornamentation and overall size. Similar examples originate from the central grave of mound K

[15] Булатовић *et al.* 2017: 125–131.

[16] Vasić 2003: 37–39.

(11) at the Paulje necropolis,[17] from grave 1 at the site of Banjevac,[18] from the site of Milina in Cer Mt.,[19] grave 3 of mound IV from the Jezero necropolis in Roćević (eastern Bosnia),[20] mound V at the Karavlaške Kuće necropolis (eastern Bosnia),[21] and grave 3 of mound II,[22] and grave 1[23] and grave 3[24] of mound IV from the Jezero necropolis in eastern Bosnia and Herzegovina. All of those pins have lavishly decorated necks, and sometimes even the head is decorated. The origin of this type of pin should be sought within the territory of Central Europe, as confirmed by their higher representation within the Danube region and lower representation within the Central Balkans.[25] The second pin is attributed to the type with a nail-shaped head and thickenings on the top, of which two are preserved (Cat. No 15). Based on the example from the neighbouring Brezovice, which has three thickenings,[26] and a similar example from grave 1 of mound I at the Šundinovača necropolis in Pađine (eastern Bosnia),[27] although with a stamp-shaped head, it is possible that the pin possessed three thickenings. Similar to the previous type, R. Vasić connects them with the territory of Central Europe and the Hügelgräber horizon and chronologically positions them into the Br D period.[28]

Besides the two pins, two torques have been recorded in the mound, of which the thinner one (Cat. No. 4) possesses almost no analogies in the area. The piece could represent one of the thin examples made of bronze wire with a circular cross-section and spirally twisted ends (damaged on this example), which are known from the Br C period, such as examples from Skakavci near Kosjerić,[29] Dubac in Jančići,[30] and Medoševac near Niš.[31] The other torque (Cat. No. 10) represents a fragment of well-known examples with thinned and twisted ends. However, our example most likely belongs to lavishly decorated examples with elaborate ornamentation, similar to the torque from the central grave of mound K (11) from the Paulje necropolis.[32] Namely, one portion of the torque is separated into fields by bands with parallel lines. In contrast to the example from mound 11, in which the motif is represented by two opposite motifs with four parallel semicircular incisions, the motif on the example from mound 28 is represented by incised decoration in the shape of the number 8, which is then repeated four times, and flanked by a punctuated band. Within the area, similar examples have been recorded in the destroyed mound from the Grotnica–Guči necropolis,[33] grave 5 of mound III from the Dubac necropolis in Jančići,[34] pyre 2 from the Ravnine necropolis in Jančići,[35] a chance find from the mound at the site of Suva Česma in Lučani,[36] grave 6 of mound IX at the Jezero necropolis,[37] and mound I from the Šundinovača necropolis.[38] Torques with different cross-sections that correspond to the examples from Paulje in terms of characteristic decoration are often found in graves from Glasinac.[39] There, such examples are positioned in the Br C-D period. Such specific ornamentation of torques can be observed on large arm rings and bracelets with a triangular cross-section with open ends within western Serbia and eastern Bosnia. R. Vasić suggests that the idea for such ornamental motifs was sought in the territory of present-day Pannonia and Central Europe, within the so-called Koszider horizon.[40]

A lavishly decorated ellipsoid bronze arm ring with open ends (Cat No. 3) has its closest analogies within the central grave of mound K (11) at the Paulje necropolis, where a pair of such arm rings has been recorded.[41] As previously mentioned, the second arm ring was most likely dislocated by agricultural works, or taken during the formation of the trench in the mid-20th century. It represents a universal form of this type of jewellery, which appears in Central Europe as early as within the Hajdúsámson Apa horizon.[42] Such and

---

[17] Цанић-Тешановић и Глигорић 2001; Булатовић *et al.* 2017: T. XVIII/49
[18] Vasić 2003: cat. 182.
[19] Булатовић *et al.* 2017: T. LXII/2.
[20] Kosorić 1976: T. XXIII/5.
[21] Косорић и Крстић 1988: T. VII/3.
[22] Косорић и Крстић 1988: T. X/7.
[23] Косорић и Крстић 1988: T. XIV/5.
[24] Косорић и Крстић 1988: T. XV/4.
[25] Vasić 2003: 37–39.
[26] Валтровић 1893: 87.
[27] Kosorić 1976: T. XXIII/6.
[28] Vasić 2003: 51.
[29] Zotović 1985: T. XIII/4.
[30] Дмитровић 2016: сл. 42/2, сл. 45/1.
[31] Vasić 2010: cat. 71.
[32] Булатовић *et al.* 2017: T. XVII/25.
[33] Дмитровић 2016: сл. 10/6–7.
[34] Дмитровић 2016: сл. 55/5.
[35] Дмитровић 2016: сл. 64/1.
[36] Дмитровић 2016: сл. 85/1.
[37] Косорић и Крстић 1988: T. XVIII/1.
[38] Косорић и Крстић 1988: T. III/2.
[39] Benac i Čović 1956: T. XXX/11, T. XXXI/1, T. XXXII/3.
[40] Vasić 2010: 27 and further.
[41] Булатовић *et al.* 2017: T. XVII/26–27.
[42] Нпр. Blajer 1984: taf. 100/B.

similarly produced examples continue to exist up to the mid-1st millennium BC and, therefore, do not represent reliable material in terms of relative chronology or regional characteristics. However, it should be highlighted that similar lavishly decorated and fully cast bronze arm rings have been recorded in the region, usually within the richest and most representative graves: the central grave of mound K (11) at the Paulje necropolis, the renowned central grave of mound 19 from Šumar,[43] which also contained the longest bronze pin (117.5 cm), grave 1 of mound II at Karavlaške Kuće (eastern Bosnia),[44] and grave 6 of mound IX at the Jezero necropolis,[45] where a bronze torque and a long bronze pin (105 cm) have been recorded as well. According to the accompanying finds, these arm rings can be positioned into the Br C-D period, as confirmed by absolute dates from mound K at the Paulje necropolis.[46]

The crescent or heart-shaped pendants with a central rung and inner branched part represent the next evolutionary phase of this kind of jewellery which originated in the territory of Central Europe during the Middle Bronze Age, and gradually spread towards the territory of southern Pannonia.[47] Such later crescent-shaped pendants, which are, according to the accompanying finds, attributed to the Br C period, are recorded in the central grave of mound K at the Paulje necropolis,[48] grave 1 of mound III at the site of Bandera,[49] the double grave of mound 6a in Šumar,[50] and further to the north, from the mound at the site of Kačer in Cerovac,[51] Metlik in Badanja,[52] graves 194,[53] 197,[54] 285,[55] 301,[56] and 302[57] from the Karaburma necropolis in Belgrade, grave 84 from the Kaluđerske Livade necropolis near Belgrade,[58] further to the west, in grave 1 of mound II at Karavlaške Kuće in Bosnia,[59] and also in distant period-related necropolises, like graves 7[60] and 11[61] from the Velebit necropolis near Senta in Vojvodina, or further to the south at the Đuđevića Brdo necropolis in Pilatovići near Požega,[62] and the necropolis in Svračkovo near Požega,[63] where faceted examples similar to Cat No. 16 have been recorded. Unfaceted examples have also been recorded in the mound from Grotnica near Guča.[64]

A bracelet with an oval cross-section and most likely open ends represents an example of well-known types of bracelets with triangular and oval cross-sections, which are of prolonged durations and possess several evolutionary variants. Such bracelets have been recorded across Europe during the Bronze Age, and do not represent a specific chronological, stylistic or typological marker regarding the cultural attribution or exchange, especially considering that ends on the example from mound 28 are not preserved and. Therefore, do not allow any potential analysis of the variant. A fine basis and detailed typology of such bracelets has recently been proposed by K. Dmitrović, who separated a total of four variants.[65] Within such a typology, our example could be attributed to variant I-Б. Within the immediate surroundings, bracelets with open ends have been recorded within mound 2 at Jovanin Breg in Banjevac,[66] a grave from Klinci near Valjevo,[67] grave 3 of mound 10 at Šumar,[68] a pair of bracelets that possess a similar motif as our bracelet, from grave 1 of mound I from the Šundinovača necropolis,[69] pairs of bracelets from graves 3[70] and 4[71] from mound II at the Jezero necropolis, pairs of bracelets from graves 3[72] and 5[73] of

[43] Гарашанин и Гарашанин 1958: 57 and further.

[44] Косорић и Крстић 1988: T. V/1–3.

[45] Косорић и Крстић 1988: T. XVII/4.

[46] Cwalinski *et al.*, forthcoming.

[47] Васић 1997: 43 and further.

[48] Булатовић *et al.* 2017: T. XIX/36–41.

[49] Гарашанин и Гарашанин 1958: 40, сл. 15.

[50] Гарашанин и Гарашанин 1967: 7–9.

[51] Церовић 2009: сл. 1.

[52] Булатовић *et al.* 2017: T. XXXIX/9–10

[53] Todorović 1977: 56.

[54] Todorović 1977: 57.

[55] Todorović 1977: 101.

[56] Todorović 1977: 110.

[57] Todorović 1977: 111.

[58] Петровић 2006: 58, T. XIII/3.

[59] Косорић и Крстић 1988: T. IV/4–5.

[60] Kapuran 2019: pl. 11/1–6.

[61] Kapuran 2019: pl. 15/2.

[62] Мандић, Домановић 2016: кат. 17.

[63] Zotović 1985: T. X/8, 11–12.

[64] Дмитровић 2016: сл. 10/3.

[65] Дмитровић 2016: 165–169, сл. 113/1–4.

[66] Unpublished find. M. Garašanin mentions this bracelet in text (*Праисторија југославенских земаља*), refer to Garašanin 1983: 747.

[67] The context of this find is unclear, as M. Valtrović published that the bracelet was found together with two torques and a medieval bronze earring. Refer to Валтровић 1893: 76–77.

[68] Гарашанин и Гарашанин 1958: 20–21, сл. 28/3.

[69] Косорић и Крстић 1988: T. II/2–4.

[70] Косорић и Крстић 1988: T. X/6.

[71] Косорић и Крстић 1988: T. XI/2–3.

[72] Косорић и Крстић 1988: T. XII/4.

[73] Косорић и Крстић 1988: T. XIV/1–2.

mound III, and pairs of bracelets from graves 1,[74] 2,[75] and 3[76] from mound IV at the Jezero necropolis, of which the last two are identical to the aforementioned examples from grave 1 of mound I from the Šundinovača necropolis and the example from mound 28.

Finally, it should be noted that bracelets made of spirally twisted thin wire with a triangular or circular cross-section, with missing ends, represent common jewellery within Late Bronze Age graves in the territory of the Central Balkans and the neighbouring regions.

* * *

Regarding the absolute dates from this mound, the earliest of four dates originates from the organic material on which the bronze arm ring was laid (find No. C-3). It was positioned next to the southern border of the modern trench, which luckily did not reach it. Therefore, it remained intact within the zone of dark-grey soil in segment C. The sample taken from the organic material below the arm ring did not contain a sufficient amount of organic matter, as it was mixed with soil. To prepare it for the AMS analysis, it was necessary to conduct the so-called *combustion* of the sample at two different temperatures – lower of approximately 400° C, and higher of approximately 800° C. The date acquired following the combustion at the higher temperature (DeA 23518) pointed to a period of the final quarter of the 15th and the 14th century BC (95% probability), or the second half of the 14th century BC (55% probability), and the end of the 15th and the first quarter of the 14th century BC (44.8% probability).[77] However, the second date from the same sample, acquired by combustion at a lower temperature (DeA 23517) yielded a slightly younger date, between the beginning of the 14th and the beginning of the final quarter of the 13th century BC (62.2% probability). As the practice in such cases dictates that the date acquired from the combustion at a lower temperature is accepted, the mound will be dated according to the younger date.[78]

According to this date, the burial of the necklace in the grave, and therefore the burial within mound 28, is chronologically positioned in a period between the beginning of the 14th and the beginning of the final quarter of the 13th century BC, or, more precisely, between the beginning of the final quarter of the 14th and the mid-13th century BC.

Concerning the chronological determination of mound 28, as well as finds recorded within, the neighbouring, almost concurrent, mound K from the site that contained almost identical grave goods should be highlighted (Table 1). Namely, the younger date acquired from the wooden base of the central grave of mound K is almost identical to the earlier date from mound 28 (a difference of one year in calibrated BP).[79] Similar burial rituals and finds have been recorded in mound C at the Paulje necropolis, which is AMS dated to the 14th century,[80] which partially matches the other existing dates from the necropolis.[81]

The samples that directly dated the trench that disturbed the southern portion of the mound originate from its infill, meaning its bottom. The first date from the trench within mound 28 (DeA 23519) originates from organic matter (carbonised wood?) recorded in segment B, immediately below the pin with a stamp-shaped head (find No. 17) in the central portion of the trench, approximately 25 cm above the bottom (Fig. 9). The sample was taken to determine the time of the formation of the trench, as the stratigraphy indicated that the trench is younger than the remains of the burial ritual represented by an oval zone of ashy soil and soot. However, it was unclear how much younger the trench was; whether it represented a part of burial ritual, period-related earthworks, or was it significantly younger? The sample pointed out that the trench was formed in modern times, sometime after 1950, which is confirmed by another date acquired from the soot within the trench infill in segment C. Those two dates confirm that the trench was of modern origin, which opens the question as to how some of the finds, although smaller in dimensions, were recorded above the trench and within its higher levels (Fig. 9)? The pin with the stamp-shaped head was carefully placed back into the ground, on a piece of wood within the trench infill (which is dated to the modern period). One of the explanations could be that the individuals who formed the trench several decades ago placed the finds back into the mound/trench, out of respect to their antecessors. This is further sup-

---

74 Косорић и Крстић 1988: T. XIV/6–7.

75 Косорић и Крстић 1988: T. XV/2.

76 Косорић и Крстић 1988: T. XV/5–6.

77 We would like to thank Dr Tóth-Hubay Katalin from Isotoptech ZRT. laboratory in Debrecen (Hungary) for consultations. Compare: McGeehin *et al.* 2001.

78 McGeehin *et al.* 2001, 261.

79 Cwalinski *et al.* forthcoming.

80 Gligorić, Filipović, Bulatović 2016.

81 The remaining dates from graves of incinerated deceased at the Paulje necropolis are unpublished and fall within the chronological span between the mid-15th to the end of the 13th century BC. The publication is in preparation.

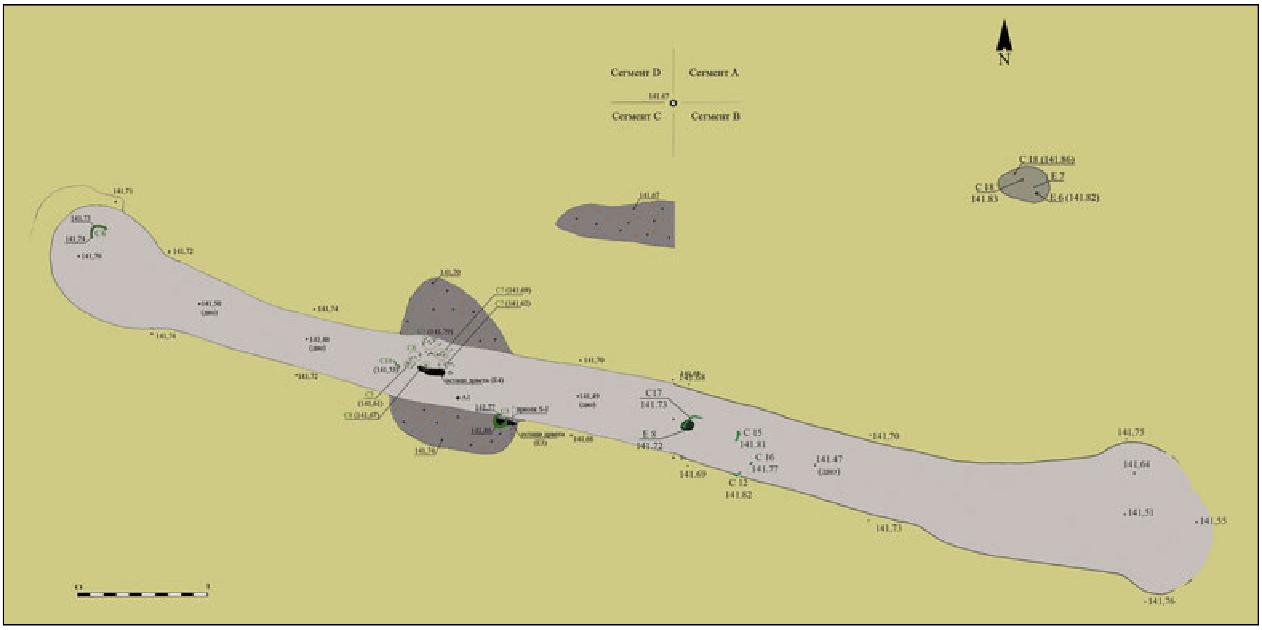


Fig. 9. Technical drawing of the base of mound 28, with features and finds

Сл. 9. Техничка скица основе хумке 28 са уоченим целинама и с налазима

ported by the fact that most of the objects were recorded above the trench infill in the zone of dark-grey ashy soil in segment C, which most likely represented the remains of the burial ritual in which the objects were originally found during the formation of the trench. Interestingly, the owner of the estate in which the mound is located, whose family bought the estate in early 70s, does not remember any earthworks in this part of the estate, so, based on both that fact and radiocarbon dates, it can be concluded that the formation of the trench occurred between the 1950s and the 1970s.

Concluding remarks

The archaeological excavations of mound 28, together with new absolute dates and the abundance of portable archaeological material, have raised several interesting problems, primarily regarding stratigraphy. Namely, considering that the results of two samples taken from the wood, meaning organic matter from the infill of the trench (it's bottom), indicated the period following the mid-20th century CE, it is clear that mound 28 was, besides annual ploughing, partially devastated at one point. Luckily, the degree of damage to the mound and portable archaeological finds within it preserved some archaeological contexts, thus enabling a partial and reserved reconstruction of some basic parameters of the burial.

It seems that solely one burial was registered within the mound, in segment C, in the central portion of the aforementioned trench. It is represented by an oval zone comprised of grey soil, irregular in dimensions (Figs. 5 and 9). Most of the bronze objects were recorded within it. However, despite the floatation sample of several dozens of kilograms of soil, taken from this zone and other areas which were distinguished by the colour of the soil, not a single bone was recorded that might indicate the existence of a grave of an incinerated deceased, as expected at the Paulje necropolis. The trench that cut the mound into the west-east axis, and partially damaged the grave, was certainly formed in the mid-20th century CE, most likely in the 50s and 60s, as confirmed by AMS dates and the testimony of the landowner. The fact that the bronze jewellery dislocated during the formation of the trench was still within the mound is surprising, since the practice shows that the sites excavated by non-professionals (locals, army, well-diggers, road constructors, etc.) are usually barren in metal finds, which are usually kept by those individuals or gifted to local teachers, priests, and museums.[82]

[82] As previously mentioned, there is a possibility that the second arm ring, paired with Cat. No. 3, was taken during the formation of the trench.

Object	Mound 28	Mound 11 (K)
decorated torques	+	+
crescent-shaped pendants	+	+
arm ring	+	+
thin bronze wire torque	+	
Bracelet with open ends (not the same type)	+	+
Spirally twisted bracelets made of thin bronze wire	+	+
long bronze pin		+
pin with nail-shaped head and thickening on the top	+	
pin with stamp-shaped head	+	+
amber jewellery	+	+

Table 1. Comparative presentation of finds from the central grave of mound K (11) and the potential grave of mound 28 at the Paulje necropolis

Табела 1. Упоредни приказ налаза из централног гроба хумке 11 (К) и потенцијалног гроба хумке 28 на Пауљама

On the other hand, the inventory of bronze jewellery and the presence of amber beads indicate that the potential grave of mound 28 represents one of the richest period-related burials in the territory of northwestern Serbia. The fact that speaks in favour of a partially destroyed rich grave is its comparison with the well documented richest burial from the Paulje necropolis, the central grave of mound K (11).[83] Namely, both graves display great similarity in terms of the jewel inventory, as presented in Table 1. One of the differences is that mound 11 (K) contained a large bronze pin, which is not recorded in mound 28, yet this mound contained a pin with a nail-shaped head and thickening on the top, which was not recorded within mound 11. On the other hand, both mounds contained two pins within the grave inventory, which is not uncommon for the Paulje necropolis, as the central grave of mound 1 (A) contained a burial with two pins, both with biconical heads and decorated thickenings on the neck.[84] The practice of burying two pins is not characteristic of the Late Bronze Age of the Central Balkans, as only a few examples have been recorded. Those are the examples from graves 135[85] and 194[86] from the Karaburma necropolis in Belgrade. Similarities with burial within mound 11 (K) are further supported by the absolute dates from both mounds, which differ by only a few decades, which is, considering the existing deviation and errors in calibration, quite a small chronological difference in terms of absolute chronology. It should be highlighted that the necropolises in eastern Bosnia, within the lower course of the Drina River, display similar combinations in grave inventories and jewellery, although with significantly lower typological variations.[87]

The potential cultural attribution of graves within the Lower Drina region has been discussed during the past decade.[88] Based on that, the find presented in this paper would be attributed to the so-called Brezjak cultural group, as one of its most representative examples. The chronology of this cultural phenomenon is well determined compared to several decades ago, when it was observed as the so-called West Serbian variant of the Vatin culture and attributed to the Middle Bronze Age.[89] According to the published, and a significant number of unpublished absolute dates, the duration of

83 Булатовић *et al.* 2017: 125–131.

84 Мадас 1990: 17.

85 Todorović 1977: 31, кат. 2–3.

86 Todorović 1977: 53–55, кат. 2–3.

87 Косорић и Крстић 1988.

88 Филиповић 2014: 51 and further; Дмитровић 2016: 231 and further; Булатовић *et al.* 2017: 53 and further; Bulatović *et al.* 2018.

89 Гарашанин 1973: 359.

this group, with enough scientific arguments today called the Bezjak group, can be approximately positioned between the beginning of the 15th and the beginning of the 12th century BC,[90] as it is assumed that the forthcoming absolute dates will not significantly influence such chronology.

The damaged grave from mound 28 provides sufficient data on the ritual, stratigraphy, and the inventory of the burial, despite its state of preservation. It seems as if mound 28 at the Paulje necropolis served for the burial of an incinerated deceased with extremely rich personal ornaments. Other rituals took place within the area of the mound, such as the transfer of a portion of the funeral pyre to the cleaned space prepared for burial and the formation of the mound with several amber beads within. The attribution to the so-called Brezjak group is clear, based on the bronze jewellery and absolute date that positions the burial between the beginning of the final quarter of the 14th and the mid-13th century BC.

[90] Gligorić, Filipović, Bulatović 2016; Bulatović *et al*. 2018; Cwalinski *et al.* forthcoming. The unpublished dates originated from settlements and mounds at the Paulje necropolis, as well as from the sites (mounds) from the West Morava Valley, and their publication is in preparation. We would like to thank our colleague K. Dmitrović.

BIBLIOGRAPHY:

Benac, Čović 1956 – A. Benac, B. Čović, *Glasinac I – bronzano doba*. Sarajevo 1956.

Blajer 1984 – W. Blajer, *Die Arm- und Beinbergen in Polen*. Prähistorische Bronzefunde X/2, München 1984.

Булатовић *et al.* 2017 – А. Булатовић, В. Филиповић, Р. Глигорић, *Лозница – културна стратиграфија праисторијских локалитета у Јадру, Рађевини и Азбуковици*. Београд – Лозница 2017. (A. Bulatović, V. Filipović, R. Gligorić, *Loznica – kulturna stratigrafija praistorijskih lokaliteta u Jadru, Rađevini i Azbukovici*. Beograd – Loznica 2017).

Bulatović *et al.* 2018 – A. Bulatović, M. Gori, M. Vander Linden, New Absolute Dates as a Contribution to the Study of the Late Bronze Age Chronology in the Central Balkans. *Glasnik SAD* 34: 121–132.

Цанић-Тешановић, Глигорић, 2001 – Ј. Цанић-Тешановић, Р. Глигорић, *Праисториска некропола Пауље код Лознице*. Лозница 2001. (J. Canić-Tešanović, R. Gligorić, Praistoriska nekropola Paulje kod Loznice. Loznica 2001.)

Церовић 2009 – М. Церовић, Хумка из бронзаног доба на локалитету Качер у Церовцу. *Museum* 10: 7–18. (M. Cerović, Humka iz bronzanog doba na lokalitetu Kačer u Cerovcu. *Museum* 10: 7–18.)

Cwalinski *et al.* forthcoming – M. Cwalinski, V. Filipović, A. Bulatović, E. Stout, R. Gligorić, S. Kaur, Paulje, mound XI (mound K): new AMS dates and provenience of the earliest amber finds in Serbia, forthcoming.

Дмитровић 2016 – К. Дмитровић, *Некрополе бронзаног доба у региjи Чачка*. Чачак 2016. (K. Dmitrović, *Bronze Age Necropolises in the Čačak Region*. Čačak 2016.)

Филиповић 2014 – В. Филиповић, Нова истраживања некропола развијеног бронзаног доба у северозападној Србији: хронолошка и терминолошка питања, *Гласник САД* 29: 51–84.

Гарашанин 1973 – М. Гарашанин, *Праисторија на тлу СР Србије*. Београд 1973. (M. Garašanin, *Praistorija na tlu SR Srbije*. Beograd 1973.)

Garašanin 1983 – M. Garašanin, 1983d. *Zapadnosrpska varijanta vatinske grupe*. pp. 736–753 in: *Praistorija Jugoslavenskih zemalja* (ur. A. Benac), tom IV. Sarajevo 1983.

Гарашанин, Гарашанин 1958 – М. Гарашанин, Д. Гарашанин, Ископавање тумула у Белотићу и Белој Цркви (Западна Србија). *Зборник радова Народног музеја* I: 17–50. (M. Garašanin, D. Garašanin, Iskopavanje tumula u Belotiću i Beloj Crkvi (Zapadna Srbija). *Zbornik radova Narodnog muzeja* I: 17–50.)

Гарашанин, Гарашанин 1967 – М. Гарашанин, Д. Гарашанин, Ископавања у комплексу Белотић – Бела Црква 1961. године. *Зборник радова Народног музеја* V: 5–30. (M. Garašanin, D. Garašanin, Iskopavanja u kompleksu Belotić – Bela Crkva 1961. godine. *Zbornik radova Narodnog muzeja* V: 5–30.)

Глигорић 2014 – Р. Глигорић, *Некропола развијеног бронзаног доба у Брезјаку. Нова истраживања хумки XVI, XVII и XVIII*. Лозница 2014. (R. Gligorić, *Nekropola razvijenog bronzanog doba u Brezjaku. Nova istraživanja humki XVI, XVII i XVIII*. Loznica 2014.)

Глигорић, Цанић-Тешановић 2010 – Р. Глигорић, Ј. Цанић-Тешановић, *Пауље, некропола бронзаног и гвозденог доба код Лознице*. Лозница/Горњи Милановац 2010. (R. Gligorić, J. Canić-Tešanović, *Paulje, nekropola bronzanog i gvozdenog doba kod Loznice*. Loznica/Gornji Milanovac 2010.)

Gligorić, Filipović, Bulatović 2016 – R. Gligorić, V. Filipović, A. Bulatović, An AMS Dated Late Bronze Age Grave from Mound Necropolis at Paulje, *Starinar* LXVI: 103–109.

Kapuran 2019 – A. Kapuran, *Velebit, a Tumulus Culture Necropolis in the Southern Carpathian Basin*. BAR International Series 2942. Oxford 2019.

Kosorić 1976 – M. Kosorić, *Kulturni, etnički i hronološki problemi ilirskih nekropola Podrinja*. Tuzla 1976.

Косорић, Крстић 1988 – М. Косорић, Д. Крстић, Хронолошка детерминација гробова из хумки са потеза Трновице–Пађине–Роћевићи. *Зборник радова Народног музеја* XIII-1: 29–56. (M. Kosorić, D. Krstić, Hronološka determinacija grobova iz humki sa poteza Trnovice–Pađine–Roćevići. *Zbornik radova Narodnog muzeja* XIII-1: 29–56.)

Мадас 1990 – Д. Мадас, *Пауље – бронзанодопска некропола*. Лозница 1990. (D. Madas, *Paulje – bronzanodopska nekropola*. Loznica 1990.)

Мандић, Домановић 2016 – Љ. Мандић, З. Домановић, *Равни Луг Пилатовићи, некропола бронзаног и старијег гвозденог доба*. Ужице 2016. (Lj. Mandić, Z. Domanović, *Ravni Lug Pilatovići, nekropola bronzanog i starijeg gvozdenog doba*. Užice 2016.)

McGeehin *et al.* 2001 – J. McGeehin, G.S. Burr, A.J.T. Jull, D. Reines, J. Gosse, P.T. Davis, D.R. Muhs, J.R. Southon, Steeped-Combustion 14C Dating of Sediment: A Comparison with Established Techniques. *Radiocarbon* 43(2): 255–261.

Петровић 2006 – Б. Петровић, *Калуђерске ливаде, некропола бронзаног доба*. Београд 2006. (B. Petrović, *Kaluđerske livade, nekropola bronzanog doba*. Beograd 2006.)

Todorović 1977 – J. Todorović, *Praistorijska Karaburma* II. Beograd 1977.

Валтровић 1893 – М. Валтровић, Преисториске старине у ваљевском и подринском округу. *Сшаринар* X, књиге 3 и 4, 75–97. (M. Valtrović, Preistoriske starine u valjevskom i podrinskom okrugu. *Starinar* X, knjige 3 i 4, 75–97.)

Васић 1997 – Р. Васић, Белешке о бронзаном добу у Србији. *Зборник радова Народноī музеја Чачак* XXVII: 37–47. (R. Vasić, Beleške o bronzanom dobu u Srbiji. *Zbornik radova Narodnog muzeja Čačak* XXVII: 37–47.)

Vasić 2003 – R. Vasić, *Die Nadeln im Zentralbalkan,* Prähistorische Bronzefunde XIII/11, Stuttgart 2003.

Vasić 2010 – R. Vasić, *Die Halsringe im Zentralbalkan*. Prähistorische Bronzefunde XI/7, Stuttgart 2003.

Zotović 1985 – M. Zotović, *Arheološki i etnički problemi bronzanog i gvozdenog doba zapadne Srbije*. Titovo Užice – Beograd 1985.

Резиме: ВОЈИСЛАВ ФИЛИПОВИЋ, Археолошки институт, Београд
АЛЕКСАНДАР БУЛАТОВИЋ, Археолошки институт, Београд
РАДА ГЛИГОРИЋ, Музеј Јадра, Лозница

ХУМКА 28 СА НЕКРОПОЛЕ ПАУЉЕ У БРЕЗЈАКУ
Прилог апсолутној хронологији позног бронзаног доба у Србији

Кључне речи. – Развијено бронзано доба, Пауље, хумка 28, апсолутна хронологија, AMS датуми, бронзани накит, ћилибар

На основу ЛИДАР снимка из 2018/19. године, на њиви која се наслања на простор шуме са некрополом Пауље, регистроване су три аномалије које представљају развучене праисторијске земљане хумке пречника до 15 m и очуваних висина до највише 0,5 m. Иако су све три хумке биле изузетно лоше очуване и развучене деценијским пољопривредним радовима, на основу археолошких ископавања констатовано је да је у хумци 28 степен очуваности археолошког материјала и појединих целина изразито задовољавајућ, док су у хумкама 29 и 30 регистровани само бледи остаци трагови потенцијалних гробних ритуала са малим бројем дислоцираних налаза.

Хумка 28 регистрована је у пречнику од око 12 m, очуване висине до 0,5 m и археолошки је истражена методом ископавања наспрамних сегмената без контролних профила. Стратиграфска слика била је једнообразна у свим деловима хумке и након слоја оранице свелобраон земље дебљине 0,25 m, регистрован је слој светле жутобраон компактне земље која је представљала првобитни насип хумке, а чија је дебљина варирала од 0,05 m на периферним деловима до 0,4 m у централним зонама хумке, док се испод ње налазила специфична здравица светлосиве боје са браонкастим и жућкастим кружним конкрецијама. На основи сегмената B и C, у самој здравици, уочен је и већи ров дужине око 7 m и ширине око 0,5 m, просечне дубине до 0,3 m, док су у зони око њега и у њему регистровани скоро сви бронзани налази који би могли припадати сету накита из периода бронзаног доба. У сегменту C, отприлике на средини поменутог рова регистрована је овална зона (гроб 1?) нешто тамније сивкасте земље, неправилних димензија око 1,35 × 1 m, у којој је нађен највећи број бронзаних предмета – бронзана, раскошно украшена елипсаста гривна размакнутих крајева откривена на органској подлози, најмање две спирално увијене наруквице од дебље бронзане жице, неколико лунуластих привезака или њихових фрагмената, те малог дела масивног и раскошно украшеног бронзаног торквеса. На крајњем западном делу рова, на око 2 m од овалне зоне, откривен је само тањи бронзани торквес, док је на 1 до 1,5 m источно, такође у простору рова, регистровано више бронзаних предмета – две бронзане игле и фрагмент фасетираног лунуластог привеска. У сегменту B, на око 2,5 m северније од рова, регистрована је кружна зона која је садржала остатке угљенисаног дрвета и перлице ћилибара мање од 10 mm, оштећене директним деловањем ватре.

Налази из хумке 28 могуће је да представљају инвентар једног, евентуално два гроба, али у сваком случају, у погледу инвентара ова је хумка једна од најбогатијих на простору некрополе Пауље. На први поглед се чини да би ови налази могли представљати сет накита једног богатог женског гроба и у том контексту они се по инвентару умногоме подударају са најбогатијом сахраном са некрополе, а то је централни гроб хумке K. У погледу апсолутних датума из ове хумке најстарији међу четири апсолутна датума потиче из органске материје на коју је била положена бронзана гривна. Према овом датуму, похрањивање ове наруквице у хумку, а самим тим и сахрана под хумком 28, хронолошки се може определити у време између почетка 14. и почетка последњег квартала 13. века, најпре у време између почетка последњег квартала 14. и средине 13. века пре н. е. Узорци који су датовали ров који је „пресекао” јужни део хумке потичу из испуне рова, односно са његовог дна. Први датум из рова хумке 28 потиче из органске материје (карб. дрво?) откривене у сегменту B непосредно испод игле са печатном главом, на средини рова, на горњој коти његове испуне, око 25 cm изнад дна рова. Овај узорак за датовање је управо узет из разлога да се утврди време укопавања рова, јер је стратиграфија указивала да је ров свакако млађи од евидентираних остатака погребног ритуала у виду зоне сиве пепељасте земље и гарежи, али се постављало питање колико је ров млађи, односно да ли је део тадашњег погребног ритуала, или, можда, представља укопавање неке друге намене из тог времена, или је пак много познији. Узорак је показао да је ров укопан у савремено доба, након 1950. године, а ово хронолошко опредељење рова потврђује још један датум добијен из гарежи пронађене у испуни рова у сегменту C.

Чини се да је у овој хумци регистрован само један гроб, и то у сегменту C, на средини поменутог рова где је регистрована овална зона нешто сивкастије земље неправилних димензија. Инвентар бронзаног накита и сама присутност ћилибарских налаза указују на то да потенцијални гроб из хумке 28 спада међу неколико најбогатијих сахрана из овог периода на територији северозападне Србије. Треба поменути да се на некрополама у источној Босни, у доњем току Дрине, у погледу инвентара гробова јављају сличне комбинације заступљености накита, али он ни у једном од њих није овако типолошки разноврстан. О потенцијалној културној припадности гробова из области доњег Подриња, доста је писано и расправљано током последње деценије, па ћемо само поменути да би овај налаз према нашем схватању свакако припадао тзв. Брезјачкој културној групи и да је он један од њених најрепрезентативнијих примера до сада.

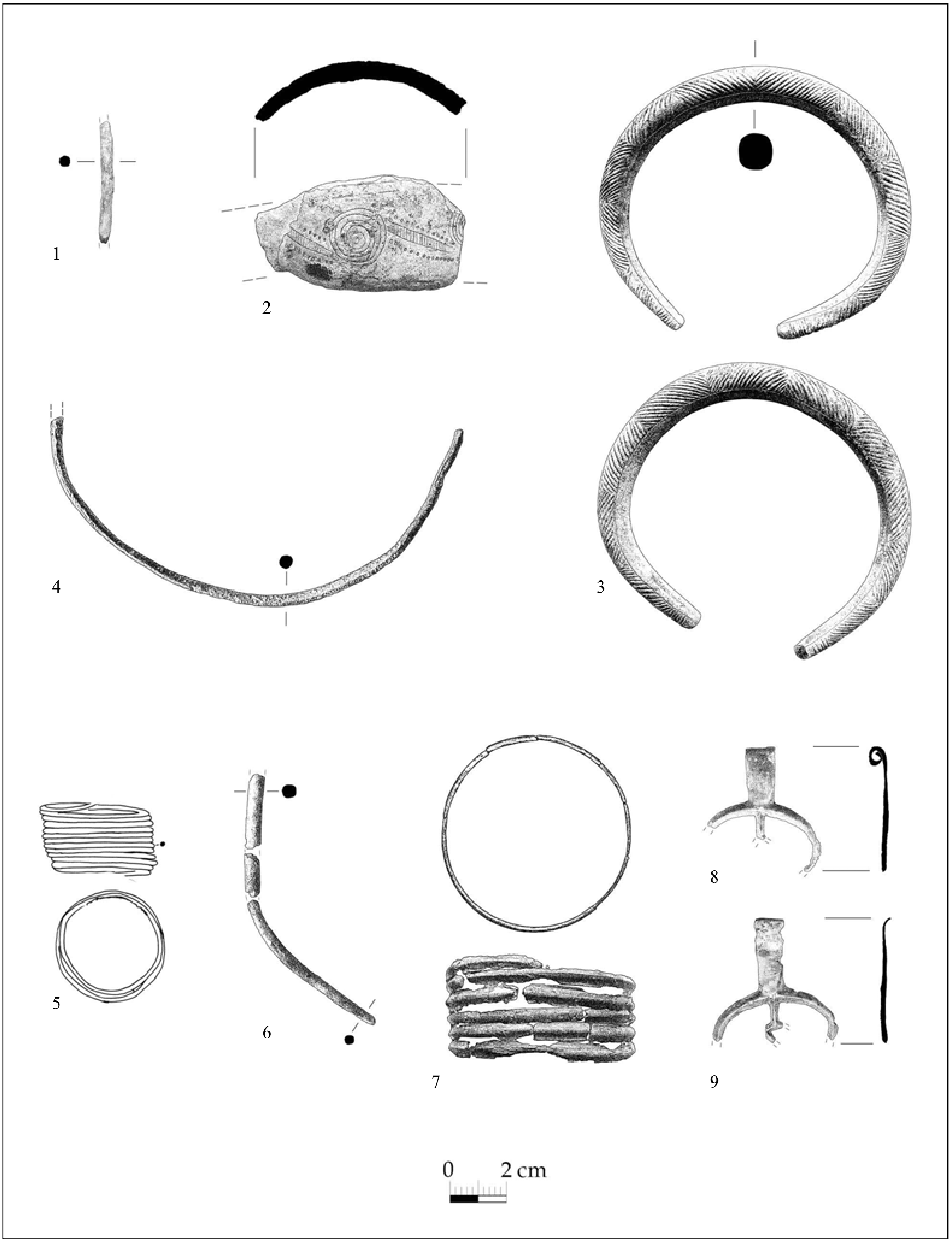


Plate I – Finds from the mound 28

Табла I – Покретни налази из хумке 28

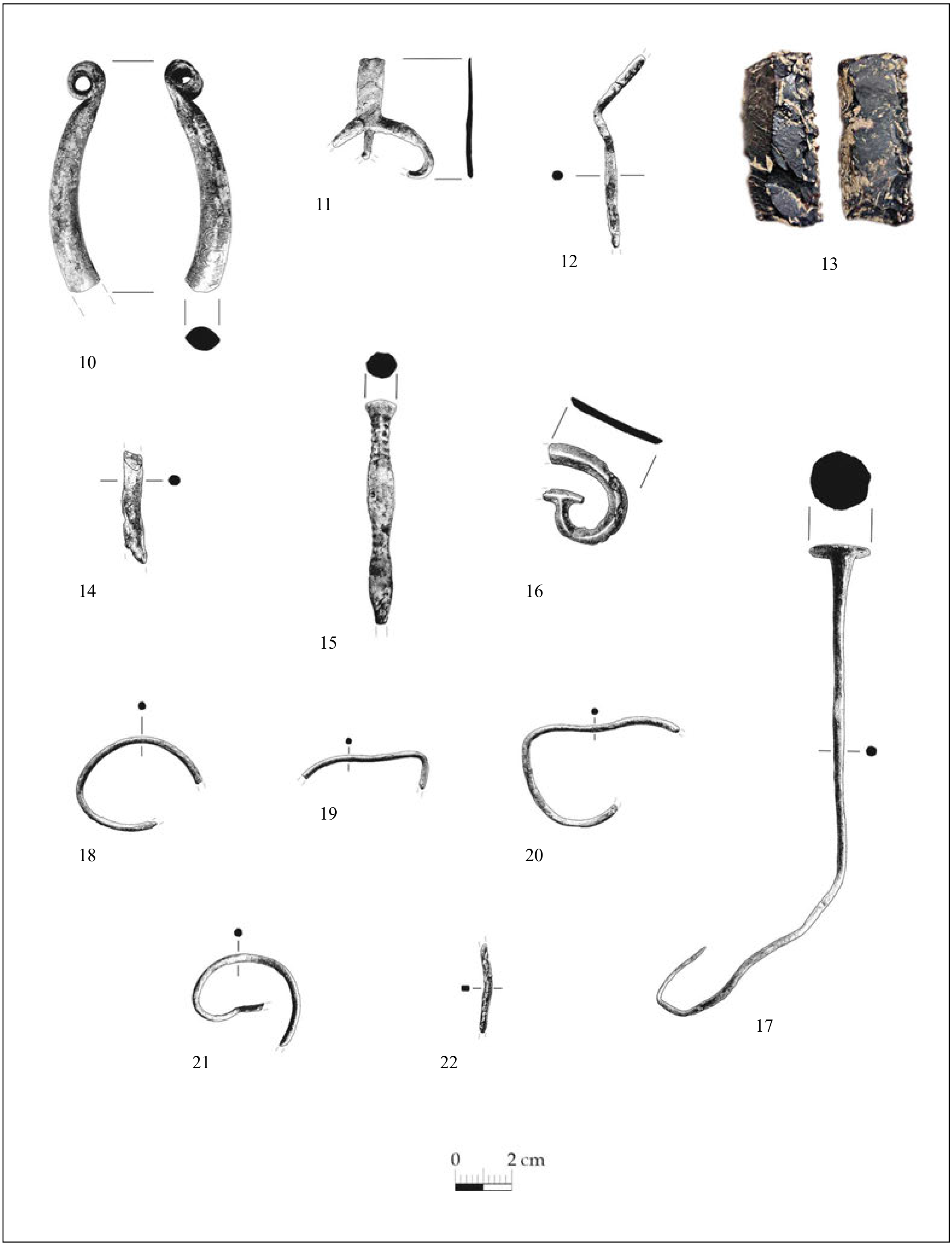


Plate II – Finds from the mound 28

Табла II – Покретни налази из хумке 28

UDC: 903"638.7"(497-15)
https://doi.org/10.2298/STA2272091D
Original research article

MARKO DIZDAR, Institute of Archaeology, Zagreb
ASJA TONC, Institute of Archaeology, Zagreb

LATE LA TÈNE FIBULAE OF THE RAKITNO-TYPE. EVIDENCE OF CONTACTS BETWEEN THE WESTERN BALKANS AND THE SOUTHERN PART OF THE CARPATHIAN BASIN

e-mail: marko.dizdar@iarh.hr

Abstract. – Fibulae with a knob on a backward-bent foot, of which different variants of the Picugi type are probably best known, evolved in the eastern Adriatic and its hinterland, and the wider south-eastern Alps during the last two centuries BC. A similar but distinct type of fibula named the Rakitno type has been identified based on its morphological characteristics and distribution. Fibulae of this type have mainly been recorded at sites in Bosnia and Herzegovina, but also in the Sava valley and eastern Slavonia. Similarities in the way they are decorated, with a series of knobs on the backward-bent foot, link fibulae of the Rakitno type with other contemporary forms recorded in the south-eastern part of the Carpathian Basin (fibulae of the Jarak type) and the south-eastern Alps (fibulae of the Mihovo type), indicating that designs were exchanged and then adapted to different communities in local workshops. On the other hand, finds of fibulae of the Rakitno type at sites in eastern Slavonia attest to contacts with communities settled in the western Balkans. Despite the absence of finds from closed associations, documented comparisons allow for fibulae of the Rakitno type to be dated to the latter half of the 2nd and the early 1st centuries BC, with the assumption that this design was typical of female costume.

Key words. – fibulae, western Balkans, Carpathian Basin, 2nd–1st centuries BCE, Late La Tène, contacts, workshops, female costume

---

One of the more readily recognisable types of fibula present along the eastern Adriatic coastline and hinterland in the 2nd and 1st centuries BC is the Picugi type. Its basic typological characteristics, distribution and dating were defined by Mitja Guštin, whose conclusions have remained essentially unchanged to this date. In addition, M. Guštin identified a recognisable variant of this type, that is a variant named after the type itself, and variants Aquileia and Vir, each with its own characteristic morphological features and basic distribution.[1] It appears that the Vir variant was represented in the eastern Adriatic hinterland, the region of particular interest to us in this instance.[2]

At first glance, some of the fibulae from this region display a great similarity with the Picugi type and its variants, but a more detailed analysis of their morphological characteristics and various distribution networks suggests the possibility of identifying certain forms that may be regarded as distinct types. Such is the case with the fibulae that are the subject of this paper – fibulae of the Rakitno type – named after the site from which the first published fibula of this distinct type originated.[3]

TYPOLOGICAL CHARACTERISTICS

Fibulae of the Rakitno type were made of bronze,[4] and only rarely of silver. The backward-bent foot, which is round in cross-section, is decorated with a spherical

---

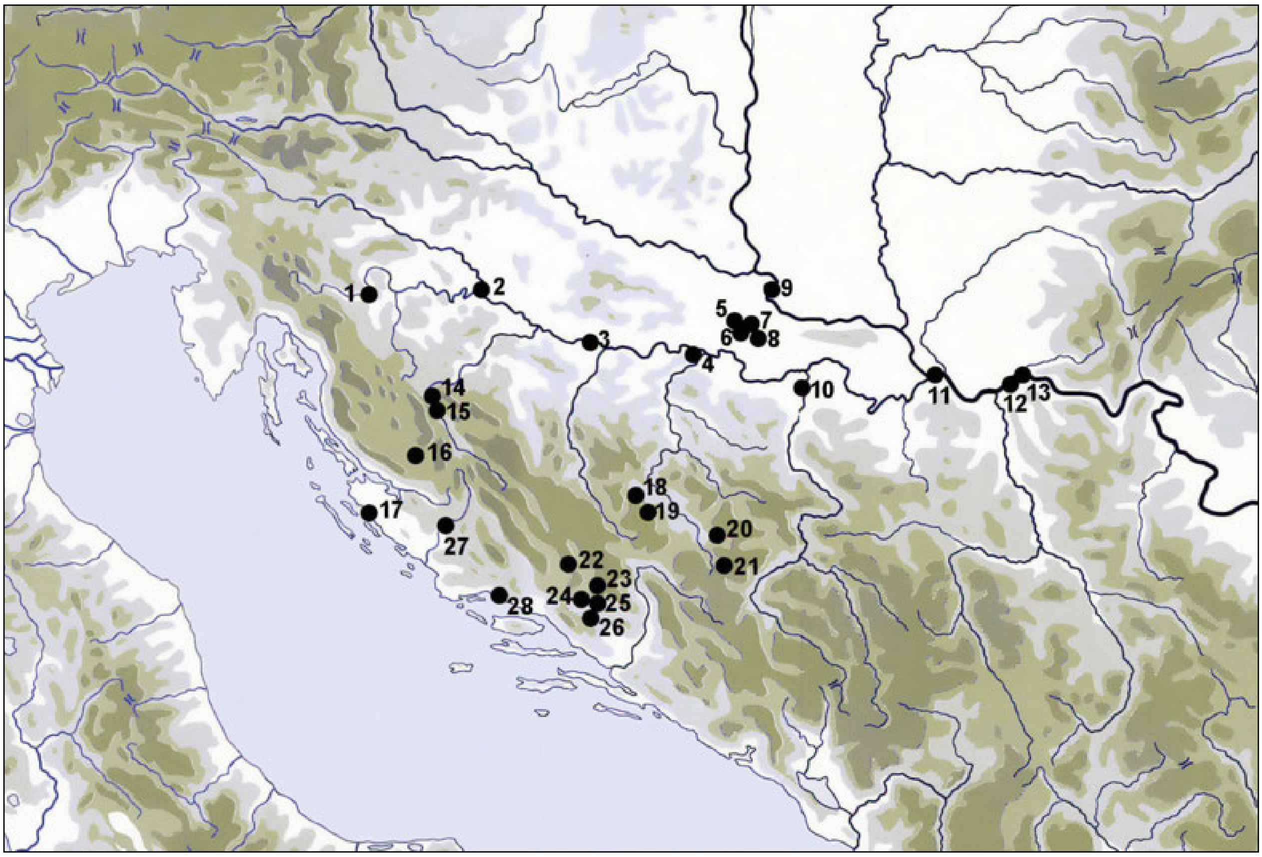
[1] Guštin 1987, 51–53; 1991, 38.

[2] Guštin 1991, 38; Tonc 2015, 236–239.

[3] Radimský 1891, 422, fig. 16.

[4] No analysis of the composition of the alloy of Rakitno type fibulae has yet been conducted.

Manuscript received 15th July 2022, accepted 27th October 2022



Map 1. Distribution of the Rakitno type fibulae:
1. Golek–Vinica; 2. Sisak; 3. Donja Dolina; 4. Prud; 5. Vinkovci–Lisičak; 6. Ivankovo–Dren; 7. Vinkovci–Blato; 8. Mirkovci–Malat; 9. Dalj; 10. Rapanović polje; 11. Beograd–Ada Huja; 12. Kostolac–Čair; 13. Kostolac – Nad Klepečkom; 14. Ribić; 15. Ripač; 16. Lički Ribnik; 17. Zadar; 18. Putičevo; 19. Alihodža kod Bile; 20. Kamenjača; 21. Sarajevo; 22. Crkvina – Livanjsko polje; 23. Rakitno-Zagradina; 24. Vir kod Posušja; 25. Gradac kod Posušja; 26. Gorica; 27. Burnum; 28. Solin

Карта 1. Распрострањеност фибула типа Ракитно:
1. Голек–Виница; 2. Сисак; 3. Доња Долина; 4. Пруд; 5. Винковци–Лисичак; 6. Иванково–Дрен; 7. Винковци–Блато; 8. Мирковци–Малат; 9. Даљ; 10. Рапановић поље; 11. Београд – Ада Хуја; 12. Костолац–Чаир; 13. Костолац – Над Клепечком; 14. Рибић; 15. Рипач; 16. Лички Рибник; 17. Задар; 18. Путичево; 19. Алихоџа код Биле; 20. Камењача; 21. Сарајево; 22. Црквина – Ливањско поље; 23. Ракитно–Заградина; 24. Вир код Посушја; 25. Градац код Посушја; 26. Горица; 27. Бурнум; 28. Солин

knob that is set roughly level with the beginning of the bow, and has a narrow annular protuberance on each side. The foot of the fibula is set directly onto the bow and is usually attached to it just beyond the midway point of the bow, towards the spring. The joint has a groove along the edges, and immediately before it, at the very end of the foot, is another hemispherical knob, similar to the previous one, and like it in having a narrow protuberance on each side. The catch-plate itself may also be shaped like a spherical knob. The knobs on the foot may also be biconical in shape. The bow is slightly bent into a knee shape towards the catch-plate, giving it a trapezoidal contour. The bow widens towards the spring, where it is oval or flat in cross-section, tapering gradually towards the other end, to become round in section before merging into the catch-plate, which is sometimes decorated in a V-shape or with shallow vertical and diagonal grooves; another short notch may also occur along the edge. The spring usually consists of four or five coils on each side, connected to the outer spring cord. The fibulae are usually about 9 or 10 cm long.

The spherical knob on the foot, the hemispherical knob just before the joint, and the slight bend in the bow towards the catch-plate, associate these fibulae with those of the Picugi variant of the eponymous type. However, Picugi-type fibulae have a somewhat shallower bow, a smaller spherical knob on the foot, and fewer ribs before the joint. The spring cord is usually wound around the bow (Fig. 1). These fibulae are usually longer, and hence of finer, daintier workmanship.[5] Fibulae of the distinct Rakitno type differ from the Picugi variant in their more substantial knobs on the foot and before the joint, in the outer spring cord, which usually has four or five coils on each side, and in the widened, sometimes slightly conically rounded section of the bow between the joint and the spring. The fibulae identified as those of the Rakitno type thus appear somewhat more robust, and may be regarded as a distinct type on account of both their morphological characteristics and their distribution.

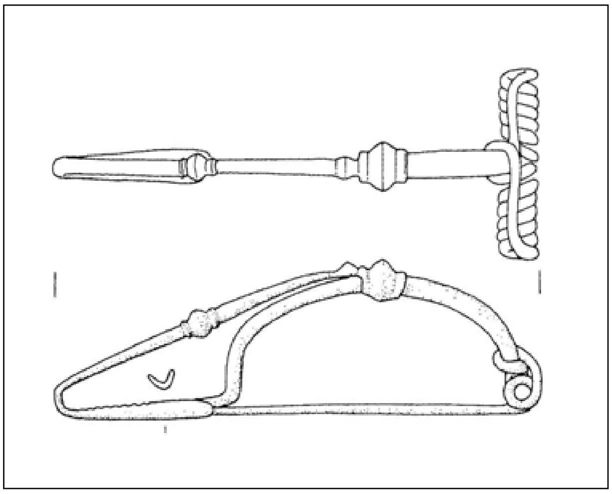


Fig. 1. Fibula of the Picugi type from Rim, near Roč in Istria (after Guštin 1987)

Сл. 1. Фибула шийа Пицуīи из Рима код Роча у Исшри (ūрема Guštin 1987)

DISTRIBUTION OF RAKITNO TYPE FIBULAE

Fibulae of the Rakitno type from Bosnia and Herzegovina

Numbers of Rakitno-type fibulae have been found in Bosnia and Herzegovina, including the first published fibula of this type, from Rakitno, for which reason this site was proposed as its eponym. Furthermore, this is one of several sites with a marked concentration of fibulae displaying the morphological characteristics outlined above: significant numbers of Rakitno-type fibulae have been found in the wider Posušje area in southern Herzegovina (Map 1). The catch-plate of the eponymous bronze fibula from Zagradina near Rakitno (Fig. 2/1) is decorated with a zigzag line probably executed by shallow grooving, while the spring has five coils on each side.[6] Two fibulae of this type are said to have come from Gorica. One of these, which is 9.5 cm in length, also has a spring with five coils on each side (Fig. 2/2), while the other has a spring with three coils on each side joined by a high-set spring cord (Fig. 2/3).[7] The spring on a fibula from Gradac near Posušje has not remained intact, with only three coils on one side remaining (Fig. 2/4).[8] Two similar bronze fibulae of this type have also been found at Vir near Posušje. One, which has been published, is 9.9 cm in length, and has a V-shaped decoration on the catch-plate, consisting of double diagonal parallel grooves (Fig. 2/5). The knob on the foot is somewhat smaller than that on the other specimens, more closely resembling those on fibulae of the Picugi variant and one from Ribić.[9] A damaged fibula, or part thereof, from Crkvina in the Livno polje, consisting of the bow and spring with five coils on each side, without the backward-bent foot, could also be included in this group of fibulae.[10] A fibula of 11.1 cm in length, found at the Ribić burial ground in the Una valley, albeit outside the area of the graves, has a narrow protuberance on the foot and slight ribbing before the joint (Fig. 2/6).[11] A similar bronze fibula found at the nearby site of Ripač, 8.8 cm in length, of which

---

5 Guštin 1987, 45–46, fig. 3/1, 4; 4/10; San Servolo 2002, 71, no. 32; Cunja, Mlinar 2010, 110–111, cat. no. 102, 109.

6 Radimský 1891, 422, fig. 16.

7 Radimský 1893, 494, fig. 29; Truhelka 1899, 360, fig. 27. This has two narrow protuberances between the hemispherical knob and the joint at the end of the foot.

8 Fiala 1893, T. V/9.

9 Marić 1962, T. II/9; 1963, T. II/3; Marić 2017, 359, cat. no. 734–735.

10 Marić 2017, 358–359, cat. no. 730, T. CXV/730.

11 Marić 1968, T. VIII/19. The fibula from grave no. 100 at Ribić, which A. Marić places in this group, differs in the number of spring coils (more than the other specimens), and it appears, though it is damaged, that it lacks the knee-bend of the bow towards the catch-plate (Marić 2017, 140, cat. no. 723, T. CXIII/723). As a result, this fibula should be excluded from the list of fibulae of Rakitno type.

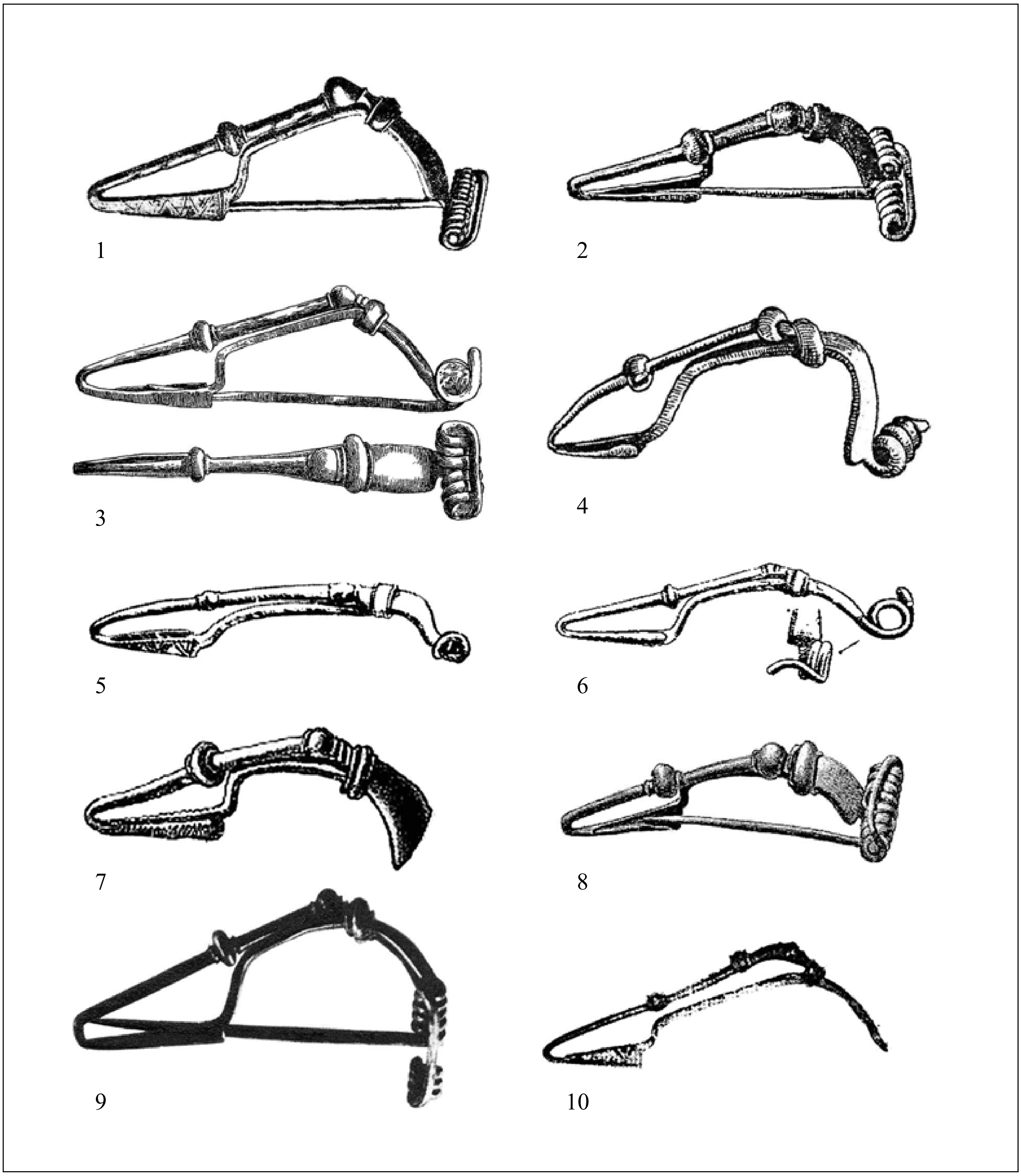


Fig. 2. Fibulae of the Rakitno type: 1. Rakitno–Zagradina (after Radimský 1891); 2–3. Gorica (after Truhelka 1899; Radimský 1893); 4. Gradac kod Posušja (after Fiala 1893); 5. Vir (after Marić 1962); 6. Ribić (after Marić 1968); 7. Ripač (after Ćurčić 1908a); 8. Putičevo (after Truhelka 1893); 9. Lički Ribnik (after Klemenc 1935); 10. Sisak (after Majnarić-Pandžić 1970)

Сл. 2. Фибуле типа Ракитно: 1. Ракитно–Заградина (према Radimský 1891); 2–3. Горица (према Truhelka 1899; Radimský 1893); 4. Градац код Посушја (према Fiala 1893); 5. Вир (према Marić 1962); 6. Рибић (према Marić 1968); 7. Рипач (према Ćurčić 1908a); 8. Путичево (према Truhelka 1893); 9. Лички Рибник (према Klemenc 1935); 10. Сисак (према Majnarić-Pandžić 1970)

the spring has not survived, has a series of small incisions on the upper edge of the catch-plate (Fig. 2/7).[12]

Several specimens of Rakitno-type fibula have also been found at sites in central Bosnia. Putičevo near Travnik yielded a fibula of 9.5 cm in length with a spring consisting of four coils on each side joined by a high-set outer spring cord (Fig. 2/8). The knob on the foot and the one before the joint are quite substantial.[13] A similar fibula from Sarajevo, with four coils on each side of the spring, has grooves on the catch-plate.[14] A fibula from Kamenjača, which is 11.3 cm long, has a ribbon-like bow, a spherical knob on the foot and a hemispherical knob just before the joint, and a spring composed of five coils on each side joined to the outer spring cord.[15] A damaged fibula from Alihodže near Bila, 7.2 cm in length, differs from those described above, having a spherical knob on the foot and another before the joint, which has three ribs. One side of the spring remains, with no fewer than ten coils, on which traces of iron corrosion can be seen, probably from the axle of the spring.[16] A fibula from the settlement at Rapanović polje, in Semberija in north-eastern Bosnia, of which the spring has not survived, has three hemispherical knobs on the foot, one before the point where it meets the bow, and two at the end of the foot, before the joint.[17]

Rakitno-type fibulae from the Sava valley, eastern Slavonia and the Danube Basin

Several fibulae that may be ascribed to the Rakitno type are also known from sites in the Sava river valley. One is a silver fibula found in Sisak, distinguished by the bow, which is widened into a trapezoid next to the spring; the spring itself consists of 8 + 7 coils joined by an outer spring cord. It has a spherical knob on the foot and before the joint, which is hemispherical.[18] A bronze fibula 9.3 cm in length, of which the spring has not survived, was found in the bed of the river Kupa, also in Sisak (Fig. 2/10). Like the fibula from Rapanović Polje, it has three knobs, one spherical on the foot and two hemispherical at the end of the foot before the joint.[19] A similar fibula from Donja Dolina, of which a length of 6.6 cm remains, with a spherical knob on the foot, has a smaller hemispherical knob before the joint. The spring has eight remaining coils on one side.[20] Another silver fibula, 8.1 cm in length with knobs on the foot and before the joint, was found in the Sava river-bed in Prud near Bosanski Šamac. The spring has three coils on each side.[21]

The next group of Rakitno-type fibulae is from eastern Slavonia, from a number of Late La Tène settlements in and around Vinkovci.[22] Fibulae from the Vinkovci – Blato site (Fig. 3/1; Fig. 4) and the Ivankovo – Dren site (Fig. 3/4), both with a preserved length of about 7 cm, have quite large spherical or biconical knobs respectively, with a narrow annular protuberance on each side on the foot, and a hemispherical knob before the joint. The bow, with a slight knee-bend towards the foot, is round in section before the joint, beyond which it widens towards the spring. Three coils of the spring, through which runs an iron wire, remain on one side of the fibula from Blato; the spring is missing from the fibula from Dren. A similarly-shaped fibula, also from the Blato settlement, has eight remaining spring coils on one side, showing traces of iron oxide, probably from the wire that ran through the spring. The next fibulae to be considered are larger, about 9 to 10 cm in length, and are of rather more elegant execution as regards the size of the spherical knobs, which barely exceed in diameter the wire foot. The hemispherical knobs at the end of the foot are also smaller. One of the fibulae from the Blato settlement (Fig. 3/2), has a decoration on the outside of the catch-plate, consisting of a series of V-shaped grooves; only three coils remain on one side of the spring, which also probably had an iron wire running through it.[23] A fourth

---

[12] Ćurčić 1908a, T. III/10; Marić 2017, 358, cat. no. 725, T. CXIV/725.

[13] Truhelka 1893, 692, fig. 12; Marić 2017, 358, cat. no. 729, T. CXV/729.

[14] Ćurčić 1908b, 380, fig. 16; Keltoi 1984, fig. 73, where the fibula is incorrectly listed under Debelo Brdo, corrected by Marić 2017, 358, cat. no. 727.

[15] Marić 2017, 358, cat. no. 726, T. CXIV/726.

[16] Marić 2017, 358, cat. no. 728, T. CXIV/728.

[17] Kosorić 1982, 125, T. IV/33.

[18] Archaeological Museum Zagreb, inv. no. P-17193; Tonc 2015, 240, cat. no. 6.45.5, T. 17/8. We are grateful to I. Drnić of the Archaeological Museum in Zagreb for the information made available for a doctoral dissertation (Tonc 2015), for the study and definition of Rakitno type fibulae in the said paper.

[19] Majnarić-Pandžić 1970, 102, T. LV/1.

[20] Marić 1964, 120–121, T. XX/12; Marić 2017, 357, cat. no. 721, T. CXIII/721.

[21] Marić 2017, 140, 357, cat. no. 722, Fig. 90.

[22] Previously only one fibula from the Vinkovci – Blato settlement has been published, see Dizdar 2016, 36–37, fig. 7/3.

[23] The fibula has a rather larger knob, similar to the previous specimens, but of larger size. We are grateful to our colleagues Hrvoje Vulić and Boris Kratofil of the Vinkovci Municipal Museum for details of the finds from the Late La Tène settlements in and around Vinkovci.

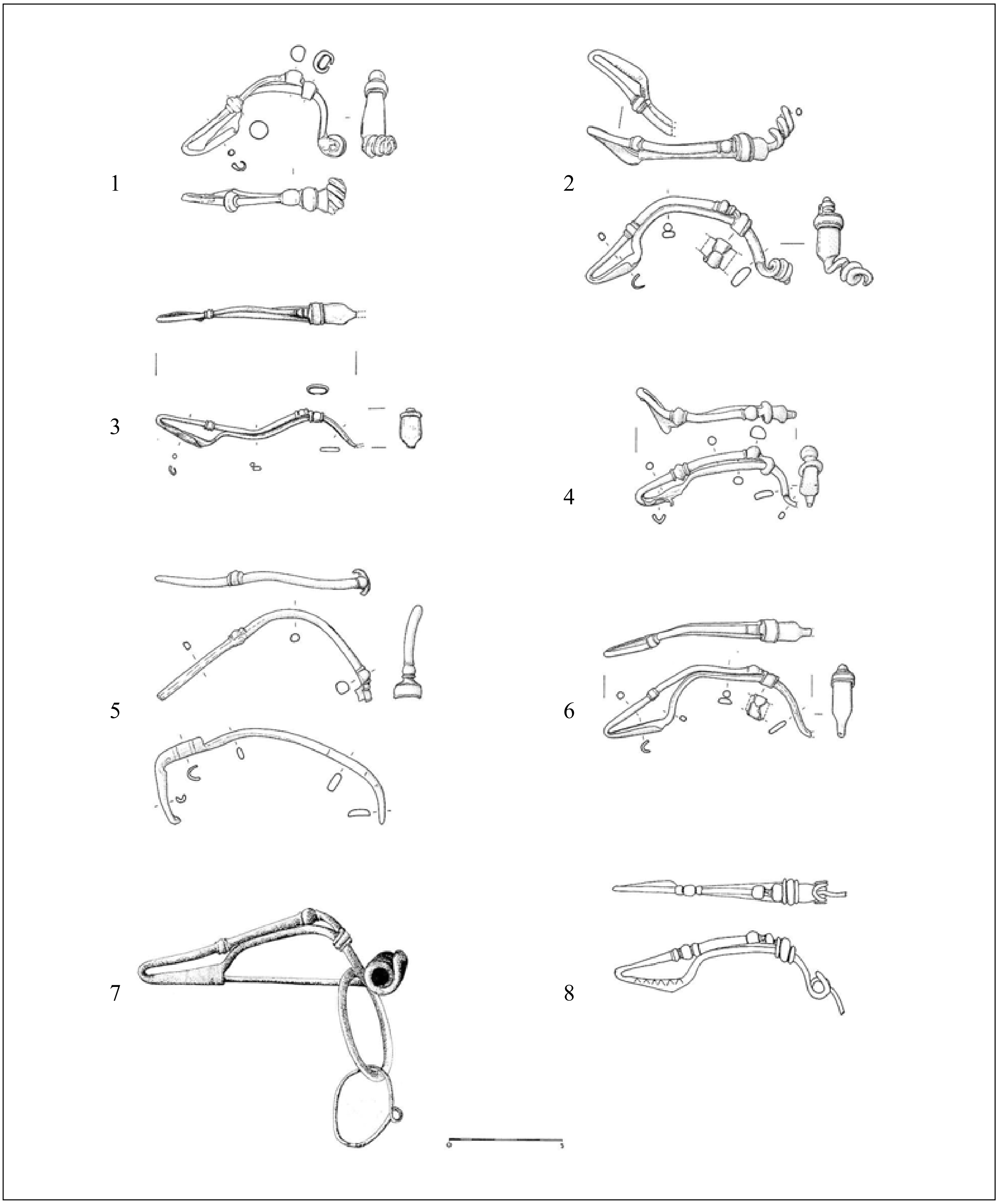


Fig. 3. Fibulae of the Rakitno type from the Scordiscan area: 1–3. Vinkovci–Blato; 4. Ivankovo–Dren; 5. Vinkovci–Lisičak; 6. Mirkovci–Malat; 7. unknown site (after Todorović 1974); 8. Kostolac–Čaire (after Jacanović 1987)

Сл. 3. Фибуле ӣиӣа Ракиӣно с ӣодручја Скордиска: 1–3. Винковци–Блаӣо; 4. Иванково–Дрен; 5. Винковци–Лисичак; 6. Мирковци–Малаӣ; 7. Неӣознаӣо налазиӣе (ӣрема Тодоровић 1974); 8. Косӣолац–Чаире (ӣрема Jacanović 1987)



Fig. 4. Fibula from Vinkovci–Blato (photo by H. Jambrek)

Сл. 4. Фибула с налазишта Винковци–Блато (фото: Х. Јамбрек)

fibula from the Blato settlement (Fig. 3/3) closely resembles Picugi type fibulae in the shape of the knobs on the foot and before the joint. The bow is narrow, oval in section in the middle, becoming strap-like towards the spring, which has not survived. One of the Late La Tène sites rich in finds – Mirkovci – Malat – yielded a fibula (Fig. 3/6) similar to the one from Blato described above. The Malat fibula has a decoration of short transverse incisions on the edges of the catch-plate; the spring is missing. Yet another Late La Tène settlement discovered not far from Blato, Vinkovci – Lisičak, yielded a Rakitno-type fibula (Fig. 3/5) on which the bow widens towards the spring, becoming ribbon-like. The foot bears a small round knob with an annular protuberance on each side; on each side of the hemispherical knob at the end of the foot, before the joint, is a single annular protuberance, flattened on the underside. The catch-plate is decorated with vertical grooves.

Along with these Rakitno-type fibulae from the Late La Tène settlements in the area of Vinkovci, other sites to the east, i.e., in the Danube Basin, should be mentioned. One fibula of this type was found in Dalj. The foot has a biconical knob with an annular protuberance on each side, while the knob before the joint is hemispherical.[24] A fibula of this type from an unknown site in Syrmia has a short spring and a small hemispherical knob on the foot, flanked on each side by a narrow knob (Fig. 3/7). In comparison with other Rakitno-type fibulae, the second knob on the foot is also spherical, with a single annular protuberance on each side. This latter is somewhat further from the joint compared with comparable knobs on other fibulae. The bow, which is trapezoid in contour, has a knee-bend towards the foot. The catch-plate is decorated with diagonal and V-shaped grooves. Two rings hang from the pin, one quite substantial, from which is suspended the second looped wire ring.[25] A 5.2 cm long bronze fibula from Ada Huja in Belgrade can be also mentioned as most probably belonging to this type, although it has three hemispherical knobs on the bent foot.[26] However, as already mentioned, three knobs appear on fibulae from Rapanović Polje and Sisak, so this feature does not exclude the proposed typological attribution. The easternmost Rakitno-type fibulae found to date come from the area of Kostolac – ancient *Viminacium*. The first comes from the Čair site. It has a rather wide lateral protuberance around the knob on the foot, and another two hemispherical knobs before the joint (Fig. 3/8). The catch-plate has a V-shaped decoration, and the spring probably had four coils joined by a high-set spring cord.[27] The second specimen comes from a pit (feature 5) on the Nad Klepečkom site. The bronze fibula is partially preserved to a length of about 6.7 cm. The backward-bent foot carries hemispherical knobs on the foot and before the joint. The pin and spring are missing.[28]

Rakitno-type fibulae from other areas

Other fibulae recorded beyond the main area of distribution may also be ascribed to the Rakitno type (Map 1). The finds from grave 131 at Golek in Vinica included a bronze fibula, 6.6 cm in length, with a wire bow, widened at the head. The foot has a slightly flattened spherical knob; the hemispherical knob is set just before the joint. The pin has not survived, and neither has most of the spring, of which only three coils remain.[29] The inventory of a hoard of jewellery and coins from Lički Ribnik includes a silver fibula, 6 cm in length, with a damaged spring that probably had four coils on each side (Fig. 2/9). The extension of the

---

[24] Majnarić-Pandžić 1970, 80, T. VI/2. The fibula is said to be 19.5 cm in length, which is probably a printing error.

[25] Todorović 1974, fig. 97.

[26] Todorović 1968, 148, T. XXXIV/1.

[27] Jacanović 1987, 13, T. III/1.

[28] Mladenović et al. 2019, 199–201, T. 2/19.

[29] See Peabody Museum Collections Online, entered as inv. no. under Quick Search: 40–77–40/11069 (https://pmem.unix.fas.harvard.edu:8443/peabody/, last accessed on 13. 04. 2018).

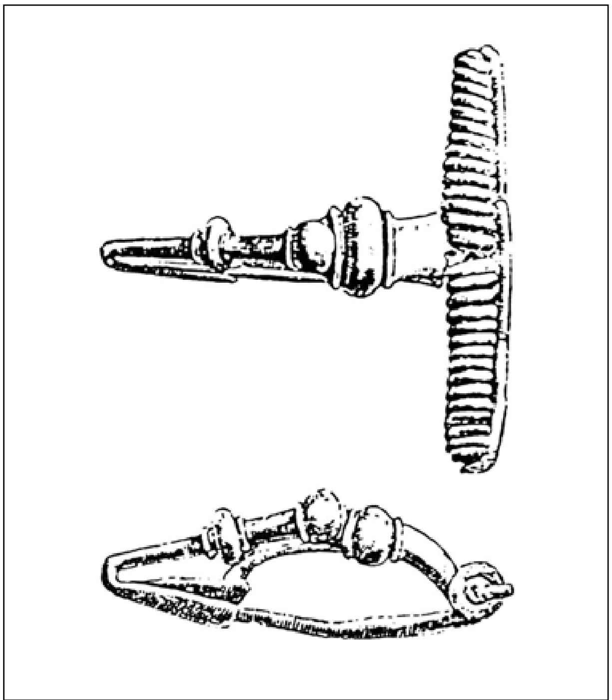


Fig. 5. A fibula comparable to the Rakitno type, from the site Szárazd–Regöly (after Archaeologiai Értesítő 1891, 280: 4a–b)

Сл. 5. Фибула сродна шипу Ракишно с налазишша Саразд–Реīељ (ӣрема Archaeologiai Értesítő 1891, 280: 4a–б)

foot bears a larger, narrower knob; the hemispherical knob is set before the joint. The outer edge of the catch-plate is decorated with a series of small vertical incisions.[30] The spherical knob on the foot of a fibula 13.1 cm in length, from Zadar, is set above the knee-bend of the bow, while the hemispherical knob is set before the joint. The bow is wider at the head. The catch-plate has a series of shallow vertical grooves on the front, and pairs of diagonal and vertical lines on the back.[31] A 7.6 cm long bronze fibula has been found at the amphitheatre location in Burnum, in the layers dated to the first half of the 1st century AD. The knob on the foot has a flattened round shape, while the one before the joint is hemispherical. Four spring coils are preserved.[32] Two bronze fibulae have been found in Solin, unfortunately without a known context, and published alongside fibulae of the Picugi type due to their similarity.[33] The first one is 8.3 cm long, with a round knob closer to the foot and a hemispherical one before the joint. The spring has five coils on each side. The catch-plate is decorated with a zig-zag incised line.[34] A similarly decorated fibula with a preserved length of 8.8 cm has a biconical knob on the foot and a hemispherical one before the joint. The entire spring is missing.[35]

Comparable fibulae that deserve mention, in addition to those of the Rakitno type described above, have been found further north, in Szárazd – Regöly[36] in Transdanubia (Fig. 5) and at the oppidum of Staré Hradisko in Moravia.[37] The large knobs and the widened bow correspond to the features of the Rakitno type, as I. Hunyadi already observed, citing fibulae from the Posušje region and Lički Ribnik as the best analogies,[38] though in this case the fibulae have very long springs.[39]

Concluding observations on distribution

The above-described fibulae of the Rakitno type reveal that almost all fibulae found in Bosnia and Herzegovina (except those from Prud) are of bronze, and have large spherical knobs and a bow that is, in part, slightly rounded and widened. As a result, they were probably made in nearby workshops. Certain differences of form are seen in the fibulae from Ribić and Vir, on which the knobs are somewhat smaller and the bow somewhat shallower in contour. The fibulae from Late La Tène settlements from the area around Vinkovci that display somewhat different typological characteristics may also most likely be attributed to a local workshop or workshops, where their basic design was given new form. Despite the possible minor differences[40] that would be the expected result of non-standardised pro-

[30] Klemenc 1935, 107, T. II/5.

[31] Nedved 1981, 166, fig. 5/198.

[32] Jadrić-Kučan, Zaninović 2015, 125, cat. no. 155. The fibula has been published as a variant of the so-called Noric-pannonian fibulae with two knobs on the bow.

[33] Marović 1967, 23–24, Fig. 10/1–5. We are grateful to D. Kliškić from the Archaeological Museum in Split.

[34] Marović 1967, 21, Fig. 10/2.

[35] Marović 1967, 21, Fig. 10/4.

[36] Szárazd is stated as the site in Archaeologiai Értesítő 1891, 280, while in Hunyadi 1944, Fig. 2 (= T. II) it is referred to as Regöly in the list of illustrations. The site is commonly referred to as Szárazd – Regöly, by linking two neighbouring toponyms from the area where the finds originated.

[37] Čižmar 2002, 214, fig. 12/3. The fibula is ascribed to the Šmarjeta type.

[38] Hunyadi 1944, 39–41.

[39] Archaeologiai Értesítő 1891, 280/2, 4, 5.

[40] E.g., the feature of three knobs on the foot before the joint on fibulae from Sisak, Rapanović Polje and Kostolac.

duction in local workshops at the end of the Iron Age, thus far Rakitno-type fibulae display a regional distribution centred primarily on central Bosnia and western Herzegovina, with another noticeable concentration of finds in eastern Slavonia (Map 1).[41] Between these are the finds in the Sava river valley, from Sisak in the west to Rapanović Polje in the east, with finds from the area of Kostolac, at present, as the easternmost point of their distribution.

It is important to note that Rakitno-type fibulae were made not only of bronze but also of silver (Sisak, Prud on the Sava river, and Lički Ribnik). It is probably not by chance that the use of silver has been recorded on the periphery of their area of distribution, though the reasons can be a matter of conjecture only: were these fibulae specifically chosen as an object of barter because they were made of silver, or were they worn by high-status individuals who could move around more freely? In any event, each community found and created its own design using the popular model with knobs on a backward-bent foot, which underwent numerous transformations in different areas, giving rise to many local types and variants.

DATING OF THE RAKITNO-TYPE FIBULAE

Distinguishing Rakitno-type fibulae from the similar but not identical fibulae of the Picugi type with their own variants raises the question of dating. Since Rakitno-type fibulae do not come from closed associations, with the exception of the hoard from Lički Ribnik, comparisons with similar, dated types of fibulae distributed from the south-east Alps region to the Danube valley form a good basis for attempting to define them chronologically.

A pair of silver fibulae with decoration very similar to that on Rakitno-type fibulae was found in grave 22 in Metlika. These fibulae have long springs with eight coils on each side, differing noticeably in their wire bow and in the form of the knob on the foot.[42] A similar form, but with a widened bow, occurs in a fragment of a silver fibula from the site of Stari grad above Unac in Notranjska.[43] A pair of relatively small silver fibulae (6.8 and 6.1 cm in length) found at Strmac near Bela Cerkev have spherical knobs on the foot, a substantial spherical joint and a bow that widens into a trapezoid, while the spring has an exceptionally large number of coils, 18 to 19 on each side.[44] A small bronze fibula (5.4 cm in length) from the same site is of identical shape, with a spring of 15 coils on each side.[45] Silver fibulae with markedly long springs and a trapezoid bow are very common in graves at Mihovo, where they probably occurred in pairs.[46] A pair of silver fibulae from grave 1656/71 has a rather shorter spring, with nine coils on each side, and as such they resemble the pair of fibulae from Metlika.[47] Wearing a pair of silver fibulae with an unusually long spring was typical of female costume from the Mokronog IIIa phase, i.e. during LT D1.[48] A fibula from Sisak with its widened trapezoid bow and the choice of silver is very similar to these fibulae that, given the significant number of specimens from this burial ground, may be called the Mihovo type. In light of this, the occurrence of silver fibulae with a long spring in the Sava valley may indicate that the design was adopted from the region of the Mokronog group, suggesting contacts following the Sava river valley eastwards. On the other hand, the use of silver and the modelling of the fibulae, particularly their more robust appearance in comparison with those from sites in the south-east Alps region, could equally reflect influences that also spread along the Sava river valley, but in the opposite direction. During this same period, LT D1 (Beograd 3a), silver or bronze fibulae of the Jarak type were made in the region of the Scordisci, to be worn as part of female costume.[49] They are markedly more substantial, with large spherical knobs and a wide bow, along with a long spring; they also differ from Rakitno-type fibulae in the position of the hemispherical knob, here set slightly apart from the joint. However, in graves 102 and 110 at Karaburma, fibulae of the Jarak type occur individually, revealing that they were

[41] The map is confined to the stated area, beyond which this type of fibula has also been recorded at the sites of Szárazd – Regöly and Staré Hradisko.

[42] Šribar 1976, 343, T. III/3,4; Keltoi 1984, fig. 37.

[43] Gaspari 2009, 321–322, fig. 6/2.

[44] Stare 1973, 41, T. 47/2–3.

[45] Stare 1973, 41, T. 46/22.

[46] Windl 1975, grave 1656/19: 28, T. XIII/9; grave 1656/24: 31, XIV/8; grave 1656/28: 34, XVI/2; grave 1657/58: 94, XLII/20; plot 1663, beyond the site: 180, LXXVIII/5–6. Though the fibulae were very likely indeed worn in pairs, it should be said that the burial complex from Mihovo is not wholly reliable (Karwowski 2017, 259).

[47] Windl 1975, 52, T. XXII/11.

[48] Božič 1999, 198; 2009, 75–76.

[49] Božič 1981, 320, T. 4/43; Guštin 1984, 327, fig. 14/6; Sladić 1991; Jevtić 2006, 94–104, map 3.

not worn in pairs as fibulae in the south-east Alps region were.[50] On the other hand, two silver fibulae of the Jarak type, which differ only slightly in size, have been recorded from the site at Jarak, which is assumed to have been a burial ground.[51] The emergence of Jarak-type fibulae is often associated with the penetration of Dacian influences from the east, where large local silver fibulae with a series of sizeable knobs were also very popular.[52] Mention should also be made of a pair of silver fibulae from Hrtkovci in the Syrmia region. These are much smaller than those of the Jarak type, being a mere 4.5 cm or so in length, and have a markedly long spring with 14 coils on each side. The spherical knobs on the foot are quite small, and the joint has a groove along each edge. Curiously, there is no hemispherical knob at the end of the foot, next to the joint. The bow is wire-like, round in section, and widens only slightly towards the spring. The catch-plate is decorated with incisions.[53] A third, fragmentary fibula, also of silver, has a shorter spring of six coils on each side, and a wire bow, round in section.[54] The fibulae from Hrtkovci more closely resemble in shape and size those from the south-east Alps region than those of the Jarak type.[55]

To the above groups of Late La Tène fibulae may be added those from Transdanubia, which display a similar decorative concept.[56] These are cast fibulae with a long spring, hemispherical knob and a bow that widens towards the head. Fibulae of this type have been classified as the Oberleiserberg type.[57] A similar specimen has been recorded in Celje.[58] A cast fibula from Novi Banovci is comparable with the Rakitno type in the decoration of the hemispherical knob and the spherical imitation joint.[59] These may be associated with other forms of cast fibulae from LT D1 that occur in the region extending from Dolenjska and northern Croatia to Lower Austria,[60] on which the execution of the decorative knobs is somewhat different and which are of a smaller size. Their long spring, however, associates them with the fibulae from Szárazd – Regöly, which are analogous to the Rakitno type. Naturally, given the differences in the way they were made, the Transdanubian fibulae are not really analogous to those classed as the Rakitno type. Even so, along with their other features of similar execution and decoration, they serve to indicate the possibility of local interpretation of a given decorative motif adapted to suit the taste and needs of each community.

In the case of communities settled in southern Herzegovina and central Bosnia, via those occupying the Una and Kupa valleys, to those living in the region between the Sava and Danube rivers, thus in the areas where fibulae classified as the Rakitno type are most common, the inspiration for their emergence could have come from the wider northern Adriatic and/or south-eastern Alps region, that is the same region where Picugi-type fibulae are found. The same origin, in which the tradition of decoration with knobs goes back to earlier times, is assumed to have inspired the cast fibulae of the Oberleiserberg type.[61] Further support for this conclusion lies in the fact that the contemporary fibulae of a more easterly distribution, those of the Jarak type, differ noticeably in their markedly larger size, and are a kind of hybrid form of the decoration with triple knobs that links all these types with the Dacian taste for the over-sized, as well as the frequent use of precious metals for the manufacture of fibulae.[62] The "gigantic" proportions of some fibulae attributed to the Corlate – Gura Padinii type have also been linked to the local aesthetic concepts of the Lower Danube area where this type was produced, while the inspiration for its creation seems to have arrived from the same source as proposed for the Rakitno type.[63] The production of silver fibulae and other objects in the south-eastern Alps region, referred to above, would also form a link with the workshops active in the eastern and south-eastern areas of the Carpathian Basin.[64]

---

[50] Todorović 1972, 33–34, T. XXXI/1, T. XXXII/5.

[51] Brunšmid 1902, 84–85, fig. 43–44.

[52] Rustoiu 1997, 31–33, 167–173, Fig. 11–17; for Dacian influences, v. Majnarić-Pandžić 2008.

[53] Dautova Ruševljan, Jevtić 2006, 293, 297, no. 2–3, fig. 2.

[54] Dautova Ruševljan, Jevtić 2006, 293, no. 4, fig. 3.

[55] Dautova Ruševljan, Jevtić 2006, 296–297.

[56] Szarazd-Regöly: Archaeologiai Értesitő XI, 1891, 280; Hunyadi 1942, T. XXIII/2; Velem-Szentvid: Miske 1908, 50–51, T. XL/21–22, 25–26, T. XLII/50; Szalacska: Darnay 1906, 430, fig. 5; Hunyadi 1942, T. XXIII/5–6.

[57] Karwowski, Militký 2011, 133–135; Drnić 2016.

[58] Lazar 1996, 280, T. 1/8.

[59] Drnić 2016, 50, fig. 1/2.

[60] Tip Magdalenska gora: Dizdar, Božič 2010, 147–153.

[61] Karwowski, Militký 2011, 135. Fibulae of the Kastav type, as a kind previous to the Picugi type both in decorative style and in distribution, indicate a tradition dating from the Middle La Tène period; see Guštin 1987, 50–51; 1991, 36–38; Blečić Kavur 2009.

[62] Cf. fibulae of type 1, also often made of silver: Rustoiu 1997, 168–173, fig. 12–17.

[63] Spânu 2020, 103–108.

[64] Laharnar et al. 2017, 126.

Though bronze and silver fibulae of the Rakitno type do not originate from closed contexts, their similarities to other types of fibulae, such as those of the Picugi type, and those of the Jarak or Mihovo type, points to a likely date of the latter half of the 2nd and the early 1st century BC, i.e., the earlier phase of the Late La Tène (LT D1). The hoard from Lički Ribnik constitutes a distinct context, consisting of a large quantity of coins as well as items associated with clothing (fibulae, and silver and amber pendants),[65] which were probably buried in the early 1st century AD.[66] Along with a Rakitno-type fibula, the hoard also included a jointed fibula of the Alesia type, two of the Almgren 18a2 type, a conical fibula with a decorative plate on the looped-back foot, one wire fibula, a very badly damaged fibula, and two Liburnian plate fibulae – all forms that may be dated to the 1st century BC. The objects and coins deposited as a hoard were probably assembled over a long period,[67] especially given the value of the objects themselves and the material from which they were made, which of course does not allow for a firm date for Rakitno-type fibulae based on this hoard, but certainly does not exclude their proposed date in the context of the LT D1 phase.

CONCLUSION

The absence of closed associations with finds of Rakitno-type fibulae makes it more difficult to consider how they were worn – individually, with a fibula of another type, or in pairs, like similar Late La Tène fibulae (e.g. Mihovo type). In the case of the latter, it may be that not only the design concept, but also the way they were used, was adopted. Yet, given that fibulae of the Jarak and Mihovo types were a typical feature of female costume in the regions of their distribution, it may be assumed that similar fibulae, those of the Rakitno type, were also part of female costume. Clearly, until burial contexts are found to confirm this, one should be cautious about defining the Rakitno-type fibulae as belonging to female costume. Furthermore, one should take into account their occurrence over a very wide area, from the hinterland of the eastern Adriatic littoral all the way to the southern part of the Carpathian Basin, areas settled in the Late Iron Age by various communities, which did not necessarily imply the same gender affiliation to this particular element of costume.

On the other hand, the distribution of the Rakitno-type fibulae adjoins that of the other similar types of fibula referred to above, from the Picugi type, cast fibulae with similar decoration, to the Jarak or Corlate – Gura Padinii types. This indicates that the model of decorating fibulae with knobs on a backward-bent foot was widely acceptable, and achieved great popularity in the Carpathian Basin, where the greatest number of different types has been recorded. This diversity also points to the existence of several workshops supplying the various regions with characteristic products adapted to local taste. Of particular interest is the concentration of the Rakitno-type fibulae in two widely separated areas – the environs of Posušje in the eastern Adriatic hinterland and in eastern Slavonia, more precisely in the Vinkovci area. Published finds of coins, in the form of drachmas of Apollonia and Dyrrachium, have already demonstrated that there were contacts between the eastern Adriatic and its hinterland and the eastern Slavonia and Syrmia regions, in regard to which the Late La Tène settlement of Vinkovci – Blato should again be highlighted as one of the centres of communication on which routes converged from different directions.[68] We also note that the shape of the long wire fibula from Sotin, with a low bow of trapezoidal contour and a short backward-bent foot,[69] has best analogies in the finds from the Vele Ledine necropolis in Gostilj, in the hinterland of Lake Skadar.[70] The isolated example of the fibula from Sotin prompts one to think that it may have reached the Danube in the hands of an individual rather than by the usual trade contacts that undoubtedly existed. The valleys of the Bosna, Vrbas and Drina rivers stand out as key routes of communication linking the western Balkans with the southern part of the Carpathian Basin, while the Neretva river further south was doubtless the key connection route towards the eastern Adriatic littoral. The presence and importance of these routes of communication are attested by Rakitno-type fibulae recorded at sites close to the mouths of the Vrbas (Donja Dolina), the Bosna (Prud) and the Drina (Rapanović Polje) which flow towards the Sava river (map 1).

On the other hand, the Sava river valley played an important part in the creation of contacts and the transmission of ideas and goods northwards, all the way to

[65] Klemenc 1935.
[66] Bilić 2012, 118–120, 135–136.
[67] Tonc 2012, 66–67; Drnić, Tonc 2014, 184.
[68] Dizdar 2016, 42.
[69] Majnarić-Pandžić 1970, 42, T. XXXVIII/1.
[70] Basler 1969, 31–32, T. IX. 37/5, T. X: 39/1, 39/2, T. XI: 45/1.

Central Europe, given that it formed the shortest route to the Danube region. The Sava river valley also formed a link between the south-eastern Alps and the Danube region, and beyond to the area along the Black Sea. The distribution of Rakitno-type fibulae would also attest to a complex, organised network of contacts during the latter half of the 2nd and the early 1st century BC (Map 1). The northernmost finds of Rakitno-type fibulae, recorded in Transdanubia and Moravia, were probably made in local workshops where craftsmen tried to follow a certain design that had originated far to the south.

Archaeological evidence of transcultural links between the western Balkans and eastern Adriatic hinterland and the Danube region needs to be investigated in greater detail, to which end further investigations at each end of this extremely busy line of communication would undoubtedly contribute. Further finds would confirm the presence of two-way contacts, also observable in earlier stages of development: finds such as the rectangular section of a bronze belt from Mahrevići that was used as a pendant,[71] fibulae from the skeletal grave of a woman in the Kamenjača burial ground near Breza, particularly one decorated with enamel,[72] and local fibulae with figure-of-eight shaped loops from Bosnia and Herzegovina, based on one of the common forms of Middle La Tène female costume widespread in the Carpathian Basin.[73]

In light of the minor morphological differences among fibulae of the Rakitno type, thus far three designs can be identified, which could correspond to areas where the workshops in which they were made were located. Transdanubian specimens are characterised by a long spring, comparable in form to contemporary cast fibulae; next come fibulae of rather more delicate workmanship, which appear in the environs of Vinkovci; while specimens from Bosnia and Herzegovina are of the form described here as the standard Rakitno-type fibula. This is undoubtedly a type belonging to the local, probably female, costume of communities living in this area, as demonstrated by finds at such settlements as Vinkovci – Blato, Ripač, and Rapanović Polje, as well as to the sites of worship of the local population (Gorica and Kamenjača). The many similarities in the appearance of Rakitno-type fibulae undoubtedly point to the use or sharing of the same design concept, in line with which their distribution provides evidence of contacts between communities in the western Balkans and the hinterland of the eastern Adriatic littoral and those living in the southern part of the Carpathian Basin in the latter half of the 2nd and the early 1st century BC.[74]

[71] Truhelka 1912, 21, fig. 12

[72] Marić 2015a, 152.

[73] Marić 2015b, 319, fig. 8. On this type of fibulae in general see Dizdar 2020.

[74] This paper was funded by the Croatian Science Foundation project *Female identity in the Iron Age in the southern Carpathian Basin* (FEMINE, IP-06-2016-1749).

BIBLIOGRAPHY:

Basler 1969 – Đ. Basler, Nekropola na Velim ledinama u Gostilju (Donja Zeta). *Glasnik Zemaljskog muzeja Bosne i Hercegovine u Sarajevu, Arheologija* n.s. XXIV, 1969, 5–107.

Bilić 2012 – T. Bilić, Late Roman republican hoards terminating with the denarii of C. L. Caesares. *Vjesnik Arheološkog muzeja u Zagrebu*, 3. s. XLV, 2012, 115–138.

Blečić Kavur 2009 – M. Blečić Kavur, Universal and Original. Transformation of style in the North-Adriatic Region, in: *Keltske študije II. Studies in Celtic Archaeology, Papers in honour of Mitja Guštin*, G. Tiefengraber, B. Kavur, A. Gaspari (eds.), Protohistoire Européenne 11, Montagnac 2009, 197–208.

Božič 1981 – D. Božič, Relativna kronologija mlajše železne dobi v jugoslovenskem Podonavju. *Arheološki vestnik* 32, 1981, 315–336.

Božič 1999 – D. Božič, Die Erforschung der Latènezeit in Slowenien seit Jahr 1964. *Arheološki vestnik* 50, 1999, 189–213.

Božič 2009 – D. Božič, A Hallstatt grave containing a cuirass, excavated near Stična by the Duchess of Mecklenburg in 1913. The reliability of grave groups from the Mecklenburg Collection. *Arheološki vestnik* 60, 2009, 63–95.

Brunšmid 1902 – J. Brunšmid, Prethistorijski predmeti iz srijemske županije. *Vjesnik Hrvatskog arheološkog društva* n.s. VI, 1902, 68–86.

Cunja, Mlinar 2010 – R. Cunja, M. Mlinar (eds.), *S fibulo v fabulo. Fibule iz Istre, s Krasa, iz Notranjske in Posočja med prazgodovino in zgodnjim srednjim vekom / Con la fibula nella storia. Fibule dall'Istria, dal Carso, dalla Carniola Interna e dall'Isontino tra preistoria e alto medioevo*, Koper/Capodistria 2010.

Čižmář 2002 – M. Čižmář, Laténský depot ze Ptení k poznání kontaktu našeho území s jihem. *Památky archaeologické* 93/2, 2002, 194–225.

Ćurčić 1908a – V. Ćurčić, Prehistorička sojenica iz brončanog doba u Ripču, kraj Bihaća u Bosni. *Glasnik Zemaljskog muzeja u Bosni i Hercegovini* XX/2, 1908, 149–179.

Ćurčić 1908b – V. Ćurčić, Prehistoričke utvrde oko Sarajeva. *Glasnik Zemaljskog muzeja u Bosni i Hercegovini* XX/3, 1908, 363–381.

Darnay 1906 – K. Darnay, Kelta pénzverő és öntő-műhely Szalacskán (Somogy M.). *Archaeológiai Értesitő* XXVI, 1906, 416–433.

Dautova Ruševljan, Jevtić 2006 – V. Dautova Ruševljan, M. Jevtić, Silver jewelry of Hellenistic and Celtic type from Hrtkovci in Srem. *Starinar* LVI, 2006, 291–307.

Dizdar 2016 – M. Dizdar, Late La Tène settlements in the Vinkovci region (Eastern Slavonia, Croatia): Centres of trade and exchange, in: *Boii – Taurisci, Proceedings of the International Seminar, Oberleis-Klement, June 14th–15th, 2012*, M. Karwowski, P. C. Ramsl (eds.), Mitteilungen der Prähistorischen Kommission Band 85, Wien 2016, 31–48.

Dizdar 2020 – M. Dizdar, Late La Tène bronze fibulae with loops on the foot (fibules à crête). Contacts between Central Europe and the south-eastern Carpathian Basin, in: *Jantarová stezka v proměnách času*, I. Čižmář, H. Čižmářová, A. Humpolová (eds.), Moravské zemské muzeum, Brno 2020, 559–568.

Dizdar, Božič 2010 – M. Dizdar, D. Božič, O nekim oblicima fibula s kasnolatenskog naselja Virovitica – Kiškorija sjever / On some shapes of fibulae from the Late La Tène settlement of Virovitica – Kiškorija north. *Prilozi Instituta za arheologiju u Zagrebu* 27, 2010, 145–160.

Drnić 2016 – I. Drnić, Contacts between the Boii and the Scordisci: the case of the Oberleiserberg type fibulae, in: *Boii – Taurisci, Proceedings of the International Seminar, Oberleis-Klement, June 14th–15th, 2012*, M. Karwowski, P. C. Ramsl (eds.), Mitteilungen der Prähistorischen Kommission Band 85, Wien 2016, 49–54.

Drnić, Tonc 2014 – I. Drnić, A. Tonc, Kasnolatenske i ranocarske fibule s japodskog prostora / Late La Tène and Early Imperial fibulae from the Iapodian territory. *Prilozi Instituta za arheologiju u Zagrebu* 31, 2014, 181–214.

Fiala 1893 – F. Fiala, Prilozi rimskoj arheologiji Hercegovine. *Glasnik Zemaljskog muzeja u Bosni i Hercegovini* V/3, 1893, 511–532.

Gaspari 2009 – A. Gaspari, Some Iron Age and Early Roman finds from Stari grad above Unec (Notranjska, Slovenia), in: *Keltske študije II. Studies in Celtic Archaeology, Papers in honour of Mitja Guštin*, G. Tiefengraber, B. Kavur, A. Gaspari (eds.), Protohistoire Européenne 11, Montagnac 2009, 315–329.

Guštin 1984 – M. Guštin, Die Kelten in Jugoslawien. *Jahrbuch des Römisches-Germanisches Zentralmuseum* 31, 1984, 305–363.

Guštin 1987 – M. Guštin, La Tène fibulae from Istria. *Archaeologia Iugoslavica* 24, 1987, 43–56.

Guštin 1991 – M. Guštin, *Posočje in der jüngeren Eisenziet*, Katalogi in monografije 27, Ljubljana 1991.

Hunyadi 1942 – I. Hunyadi, *Die Kelten im Karpatenbecken (Tafelband)*, Dissertationes pannonicae serie II, 18, Budapest 1942.

Hunyadi 1944 – I. Hunyadi, *Kelták a Kárpátmedencében*, Dissertationes pannonicae serie II, 18, Budapest 1944.

Jacanović 1987 – D. Jacanović, Keltski grob iz Kostolca. *Viminacivm* 2, 1987, 7–17.

Jadrić-Kučan, Zaninović 2015 – I. Jadrić-Kučan, J. Zaninović, *Fibule iz Arheološke zbirke Burnum / Fibulae from the Burnum Archaeological Collection*, Drniš – Šibenik 2015.

Jevtić 2006 – M. Jevtić, Karakter nalaza i hronologija, in: M. Jevtić, M. Lazić, M. Sladić, *Židovarsko blago, Ostava srebrnog nakita iz naselja Skordiska*, Gradski muzej Vršac – Filozofski fakultet Beograd, Vršac–Beograd 2006, 81–166.

Karwowski 2017 – M. Karwowski, Celtic glass from Mihovo, in: *Stories that made the Iron Age. Studies in Iron Age Archaeology dedicated to Natalie Venclová*, J. Kysela, A. Danielisová, J. Militký (eds.), Prague 2017, 259–277.

Karwowski, Militký 2011 – M. Karwowski, J. Militký, The Oberleiserberg types in the context of Taurisci influences, in: *The Eastern Celts. The communities between the Alps and the Black Sea*, M. Guštin, M. Jevtić (eds.), Koper–Beograd 2011, 131–136.

Keltoi 1984 – *Keltoi. Kelti i njihovi suvremenici na tlu Jugoslavije,* Narodni muzej, Ljubljana 1984.

Klemenc 1935 – J. Klemenc, Ostava u Ličkom Ribniku. *Vjesnik Hrvatskog arheološkog društva*, n. s. XVI, 1935, 83–125.

Kosorić 1982 – M. Kosorić, Rezultati istraživanja praistorijskih naselja na području Semberije. *Članci i građa za kulturnu istoriju istočne Bosne* XIV, 1982, 121–132.

Laharnar et al. 2017 – B. Laharnar, Ž. Šmit, A. Šemrov, On La Tène silver finds from Slovenia, in: *Stories that made the Iron Age. Studies in honour of Natalie Venclová*, J. Kysela, A. Danielisová, J. Militký (eds.), Prague 2017, 123–137.

Lazar 1996 – I. Lazar, Latènezeitliche und frührömische Funde aus der Savinja in Celje. *Arheološki vestnik* 47, 1996, 279–296.

Majnarić-Pandžić 1970 – N. Majnarić-Pandžić, *Keltsko-latenska kultura u Slavoniji i Srijemu*, Acta Musei Cibalensis 2, Vinkovci 1970.

Majnarić-Pandžić 2008 – N. Majnarić-Pandžić, Another look at the silver jewellery from Psarjevo near Zelina in Northwestern Croatia, *Archaeologia Adriatica* II, 2008, 315–323.

Marić 2015a – A. Marić, Nova interpretacija groba sa skeletnim ukopom žene iz mlađeg željeznog doba s Kamenjače u Brezi kod Sarajeva. *Godišnjak Centra za balkanološka ispitivanja,* knjiga 44, 2015, 143–157.

Marić 2015b – A. Marić, Fibulae with the figure-of-eight decoration in the area of the Boii: testimony to their south-eastern connections, in: *Boier zwischen Realität und Fiktion, Akten des Internationalen Kolloquiums in Český Krumlov vom 14.–16. November 2013*, M. Karwowski, V. Salač, S. Sievers (eds.), Kolloquien zur Vor- und Frühgeschichte Band 21, Bonn 2015, 309–321.

Marić 2017 – A. Marić, *Late Certosa and La Tène fibulae from Bosnia and Herzegovina*. Unpublished PhD thesis, University of Ljubljana, 2017.

Marić 1962 – Z. Marić, Vir kod Posušja. *Glasnik Zemaljskog muzeja u Sarajevu, Arheologija*, n.s. XVII, 1962, 63–72.

Marić 1963 – Z. Marić, Keltski elementi u mlađem željeznom dobu Bosne i Hercegovine. *Glasnik Zemaljskog muzeja u Sarajevu, Arheologija*, n.s. XVIII, 1963, 63–83.

Marić 1964 – Z. Marić, Donja Dolina. *Glasnik Zemaljskog muzeja u Sarajevu, Arheologija,* n.s. XIX, 1964, 5–128.

Marić 1968 – Z. Marić, Japodske nekropole u dolini Une. *Glasnik Zemaljskog muzeja Bosne i Hercegovine u Sarajevu, Arheologija*, n. s. XXIII, 1968, 5–80.

Marović 1967 – I. Marović**,** Prahistorijski nalazi na području Solina. *Vjesnik za arheologiju i historiju dalmatinsku* LXII (1960), 1967, 5–29.

von Miske 1908 – K. von Miske, *Die prähistorische Ansiedelung Velem St. Vid*, Band I, Wien 1908.

Mladenović et al. 2019 – O. Mladenović, M. Jovičić, I. Danković, Naselje Skordiska na lokalitetima Rit i Nad Klepečkom / Scordisci settlement at the sites of Rit and Nad Klepečkom, in: *Viminacium in prehistory: excavations 2005 –2015 / Viminacij u praistoriji: iskopavanja 2005–2015.*, A. Kapuran, A. Bulatović, S. Golubović, V. Filipović (eds.), Beograd 2019, 177–222.

Nedved 1981 – B. Nedved, Nakit rimskog razdoblja, in: *Nakit na tlu sjeverne Dalmacije od prapovijesti do danas*, Zadar 1981, 151–182.

Radimský 1891 – V. Radimský, Visoravan Rakitno u Hercegovini. *Glasnik Zemaljskog muzeja u Bosni i Hercegovini* III/4, 1891, 413–424.

Radimský 1893 – V. Radimský, Arheološke crtice iz Bosne i Hercegovine. *Glasnik Zemaljskog muzeja u Bosni i Hercegovini* V/3, 1893, 479–497.

Rustoiu 1997 – A. Rustoiu, *Fibulele din Dacia preromană (sec. II î.e.n. – I e.n.)*, Biblioteca Thracologica XXII, Bucureşti 1997.

San Servolo 2002 – *La necropoli di San Servolo. Veneti, Istri, Celti e Romani nel territorio di Trieste*, Civici Musei di Storia ed Arte, Trieste 2002.

Sladić 1991 – M. Sladić, Fibule tipa Jarak sa lokaliteta Židovar u Banatu. *Rad vojvođanskih muzeja* 33, 1991, 23–27.

Spânu 2020 – D. Spânu, Practici depoziţionale non-funerare La Tène târziu în sud-vestul României. Descoperirile de la Glogova şi Desa. *Materiale şi cercetări arheologice (serie nouă)* XVI, 2020, 87–117.

Stare 1973 – V. Stare, *Prazgodovina Šmarjete*. Katalogi in monografije 10, Narodni muzej Slovenije, Ljubljana 1973.

Šribar 1976 – V. Šribar, Žgano srednjelatensko grobišče v Metliki. *Arheološki vestnik* 25 (1974), 1976, 319–352.

Todorović 1968 – J. Todorović, *Kelti u jugoistočnoj Evropi*, Beograd 1968.

Todorović 1972 – J. Todorović, *Praistorijska Karaburma I – nekropola mlađeg gvozdenog doba*, Dissertationes et Monographiae 13, Beograd 1972.

Todorović 1974 – J. Todorović, *Skordisci*, Monumenta Archaeologica 2, Novi Sad – Beograd 1974.

Tonc 2012 – A. Tonc, Silver pendants with anthropomorphic representations in the territory of the Eastern Adriatica protohistoric societies, in: *Masken der Vorzeit II. Internationale Tagung vom 19. bis 21. November 2010 in Halle (Saale)*, H. Meller, R. Maraszek (eds.), Tagungen des Landesmuseum für Vorgeschichte Halle 7, Halle 2012, 63–70.

Tonc 2015 – A. Tonc, *Protopovijesne zajednice na sjevernom dijelu istočne obale Jadrana i njezinu zaleđu.* Unpublished PhD thesis, University of Zagreb, 2015.

Truhelka 1893 – Ć. Truhelka, Iskopine u dolini Lašve 1893. I. Uvod. *Glasnik Zemaljskog muzeja u Bosni i Hercegovini* V/4, 1893, 685–699.

Truhelka 1899 – Ć. Truhelka, Dva prehistorijska nalaza iz Gorice (ljubuškog kotara). *Glasnik Zemaljskog muzeja u Bosni i Hercegovini* XI/2, 1899, 339–395.

Truhelka 1912 – Ć. Truhelka, Ein Tumulus der La-Tène-Periode in Mahrevići (Bez. Čajnica). *Wissenschaftliche Mittheilungen aus Bosnien und der Hercegovina* 12, 1912, 12–28.

Windl 1975 – H. Windl, *Das latène- und kaiserzeitliche Gräberfeld von Mihovo, Unterkrain (Dolenjsko).* Unpublished PhD thesis, Wien 1975.

Резиме: МАРКО ДИЗДАР, Археолошки институт, Загреб
АСЈА ТОНЦ, Археолошки институт, Загреб

КАСНОЛАТЕНСКЕ ФИБУЛЕ ТИПА РАКИТНО. СВЕДОЧАНСТВО КОНТАКАТА ЗАПАДНОГА БАЛКАНА И ЈУЖНОГА ДЕЛА КАРПАТСКЕ КОТЛИНЕ

Кључне речи. – фибуле, западни Балкан, Карпатска котлина, 2–1. век п. н. е., касни латен, контакти, радионице, женска ношња

Приликом разматрања различитих типова фибула распрострањених дуж источне обале Јадрана и њеног залеђа током 2–1. века п. н. е. уочене су фибуле које показују велику сличност с типом Пицуги и припадајућим варијантама, но показују специфичне морфолошке карактеристике и дистрибуцију које подупиру њихово издвајање у засебан тип, назван тип Ракитно према налазишту с којег потиче прва таква објављена фибула. Фибуле типа Ракитно израђене су од бронзе, само изузетно од сребра. Уназад пребачена ножица округлог пресека украшена је једним кугластим задебљањем постављеним отприлике у равни с почетком лука, при чему куглица са сваке стране има још по једно уско прстенасто задебљање. Ножица фибуле се потом директно наслања на лук те се најчешће спаја с њим одмах након половине лука према спирали. Спојница уз рубове има по један жлеб те се непосредно испред ње, при самом крају ножице, налази још једно полулоптасто задебљање слично претходном, које такође са сваке стране може имати по једно уско задебљање. Сама спојница такође може бити обликована попут лоптастог задебљања. Задебљање на ножици може имати и биконични облик. Лук има благо коленасти прелаз према држачу игле, што му даје трапезоидан обрис. Према спирали лук се проширује те је овалног или тракастог пресека, док се према другом крају постепено сужава попримајући округли пресек испред прелаза у држач игле, који је понекад украшен у облику латиничног слова V или усправно те косо постављеним плитким жлебовима, при чему се на рубу још могу налазити кратки урези. Спирала се најчешће састоји од четири до пет навоја са сваке стране, који су повезани с спољном тетивом. Дужина фибула у просеку најчешће износи 9–10 cm. Лоптасто задебљање на ножици, односно полулоптасто постављено непосредно испред спојнице, те благо коленасто обликован прелаз лука према држачу за иглу, повезују ове фибуле с варијантом Пицуги истоименог типа, од које се, међутим, разликују по масивнијим задебљањима на ножици и испред спојнице, затим по спољној тетиви спирале која по правилу има четири до пет навоја са сваке стране те по проширеном, понекад благо чунасто заобљеном луку на делу између спојнице и спирале. Због тога фибуле издвојене као тип Ракитно делују нешто масивније, па се управо због наведених морфолошких карактеристика као и дистрибуције могу сматрати посебним типом.

С простора данашње Босне и Херцеговине потиче већи број фибула типа Ракитно, укључујући и прву објављену фибулу с епонимног налазишта које се уједно налази на подручју знатне концентрације фибула овог типа – шире околине Посушја у јужној Херцеговини (Карта 1, Сл. 2/1–5). Фибуле су пронађене и у Поуњу (Сл. 2/6, 7), на налазиштима у средњој Босни (Карта 1; Сл. 2/8), затим у Сиску, Доњој Долини, Пруду (Сл. 2/10). Следећу групу фибула типа Ракитно налазимо на простору источне Славоније, односно фибуле потичу с неколико каснолатенских насеља из Винковаца и околине: Винковци–Блато (Сл. 3/1–3; Сл. 4), Иванково–Дрен (Сл. 3/4), Мирковци–Малат (Сл. 3/6), Винковци–Лисичак (Сл. 3/5). Поједини налази пронађени су на локалитетима смештеним на дунавској обали, у Даљу, непознатом налазишту у Срему (Сл. 3/7), потом на положају Београд – Ада Хуја те на два положаја код Костолца – Чаир и Над Клепечком, која уједно за сада представљају најисточнију тачку распростирања. Фибулама типа Ракитно могу се приписати и поједини налази забележени изван основног подручја распростирања, односно фибуле из гроба 131 с Голека у Виници, сребрна фибула из оставе накита и новца из Личког Рибника (Сл. 2/9), из Задра те два примерка из Солина. Треба споменути и сличне налазе фибула које се појављују северније, тачније у Саразд–Регељу (Szárazd–Regöly) у Прекодунавској Мађарској – *Transdanubia* (Сл. 5) те на оппидуму Старе Храдиско у Моравској, иако се ту појављују фибуле с врло дугим спиралама. Готово су све фибуле с подручја данашње Босне и Херцеговине (осим с налазишта Пруд) бронзане те имају крупна лоптаста задебљања као и благо заобљени проширени део лука, због чега би се вероватно могле сматрати производима блиских радионица. Фибуле нешто грацилније израде које потичу с каснолатенских насеља из околине Винковаца врло вероватно се могу приписати другој, локалној радионици/радионицама где је основни идејни образац доживео нову израду. Као трећа могућа радионичка група истичу се примерци из области Прекодунавске Мађарске – *Transdanubia* које одликује појава дуге спирале.

Иако бронзане и сребрне фибуле типа Ракитно не долазе из затворених целина, постојеће сличности с другим типовима фибула, како онима типа Пицуги, тако и фибулама типа Јарак или Михово, упућују на њихово вероватно датирање у раздобље друге половине 2. и почетка 1. века п. н. е., односно у старију фазу касног латена (LT D1). Сребрне фи-

буле типа Михово одликују се изразито дугом спиралом као и трапезоидним проширењем лука. Врло су честе у гробовима на епонимном налазишту Михову, где се вероватно појављују у пару. Током LT D1(степен Београд 3а) на подручју Скордиска као део женске ношње јављају се сребрне или бронзане фибуле типа Јарак. Оне су изразито масивне, с крупним кугластим задебљањима и широким раскованим луком те дугачком спиралом, при чему се разлика у односу на фибуле типа Ракитно такође може препознати и у положају полулоптастог задебљања, овде мало удаљенијег од спојнице. Набројаним групама каснолатенских фибула могу се придодати и оне из области Прекодунавске Мађарске које показују сличну концепцију украса, односно ливене фибуле дугачке спирале, с полулоптастим задебљањима и проширењем лука испред главе које су издвојене као тип Оберлајсерберг.

Инспирација за настанак фибула типа Ракитно могла је доћи са ширег севернојадранског и/или југоисточноалпског простора, односно истог оног на којем налазимо фибуле типа Пицуги. Исто је исходиште, у којем традиција украшавања путем задебљања сеже у претходна раздобља, претпостављено као подстицај за настанак ливених фибула типа Оберлајсерберг. На такав закључак указује и спознаја како се истовремене фибуле источније распрострањености, односно фибуле типа Јарак знатније разликују по изразитој масивности те представљају својеврсну мешавину украса троструких задебљања који повезује све наведене типове те споменутог дачког укуса за предимензионирање као и честу употребу драгоценог метала за њихову израду.

Одсутност затворених целина с налазима фибула типа Ракитно отежава тумачења о начину њиховог ношења, односно јесу ли биле ношене појединачно, уз неку фибулу другог типа или пак у пару попут сличних каснолатенских фибула (нпр. типа Михово). У случају овог последњег, могло би се говорити не само о преузимању идејног обрасца већ и начина његовога коришћења. Ипак, с обзиром на то да су фибуле типа Јарак и Михово биле карактеристичан део женске ношње на просторима њиховог распростирања, могуће је претпоставити како су и њима сличне фибуле, оне типа Ракитно, представљале део ношње жена. Наравно, пре проналаска гробних целина које би тако нешто и потврдиле, нужан је опрез у дефинисању фибула типа Ракитно као дела женске ношње. Надаље, свакако треба узети у обзир њихову појаву на врло широком простору, од залеђа источнојадранске обале све до јужних делова Карпатске котлине, односно на подручјима која су током млађег гвозденог доба насељавале различите заједнице које нису нужно истом елементу ношње, у овоме случају фибулама типа Ракитно, придавале истозначну родну припадност.

Распрострањеност фибула типа Ракитно надовезује се на распрострањеност других споменутих слично обликованих типова фибула. То указује на прихваћеност модела украшавања фибула путем задебљања на уназад пребаченој ножици, који је велику популарност стекао управо на простору Карпатске котлине, где је и забележен највећи број различитих сродних типова и варијанти. Таква разноврсност уједно указује на постојање више радионица које су снабдевале поједина подручја карактеристичним, локалном укусу прилагођеним производима.

Посебно је занимљива концентрација фибула типа Ракитно на два удаљена подручја – у околини Посушја у залеђу источног Јадрана те у источној Славонији, односно у околини Винковаца. На постојање контаката источног Јадрана са залеђем с просторима источне Славоније и Срема већ су указали објављени налази новца, тачније драхми Аполоније и Дирахија, при чему се још једном мора истакнути каснолатенско насеље Винковци–Блато као једно од комуникацијских средишта у којем се сусрећу комуникацијски правци из различитих смерова. Долине река Босне, Врбаса и Дрине могу се издвојити као кључни комуникацијски правци којима се остваривала повезаност западнога Балкана с јужним делом Карпатске котлине, при чему је ток реке Неретве даље према југу вероватно био кључан правац за повезаност с источном обалом Јадрана. Долина реке Саве имала је и важну улогу у остварењу контаката те даљем преношењу идеја и добара према северу, све до простора средње Европе, будући да је представљала најкраћу комуникацију према Подунављу. Исто тако, долином реке Саве остваривала се повезаност између југоисточноалпског простора с Подунављем и даље подручјем уз Црно море. О постојању тако организоване комплексне мреже контаката током друге половине 2. и почетак 1. века п. н. е. сведочила би тако и распрострањеност фибула типа Ракитно. Управо најсевернији налази фибула типа Ракитно, забележени на подручју Прекодунавске Мађарске и Моравске, вероватно указују на производе локалних радионица које су у изради покушале да следе одређени идејни образац настао далеко на југу.

UDC: 904:739(398)"00"
https://doi.org/10.2298/STA2272109R
Original research article

AUREL RUSTOIU, Romanian Academy, Institute of Archaeology and Art History, Cluj–Napoca, Romania

THE "DACIAN" SILVER HOARDS FROM MOESIA SUPERIOR. TRANSDANUBIAN CULTURAL CONNECTIONS IN THE IRON GATES REGION FROM AUGUSTUS TO TRAJAN

e-mail: aurelrustoiu@yahoo.com

Abstract. – The aim of this paper is to discuss some aspects concerning the "Tekija–Bare hoards horizon": their "Dacian" origin, their significance, and the manner in which this phenomenon emerged after the practice of burying assemblages of silver body ornaments had ceased to the north of the Danube one or two generations earlier. The so-called Tekija–Bare group of hoards originates from the northern Danubian hoards containing silver body ornaments. This is demonstrated by the typology of some silver costume accessories and the tradition of burying them together with silver coins and metal or ceramic vessels. The appearance of these hoards south along the Danube in the second half of the 1st century AD was the result of the revival of some northern Danubian ritual practices. This revival can be ascribed to the "Getae" who were moved to the south of the river by Aelius Catus at the beginning of the 1st century AD and were later known as Moesi, according to Strabo (VII.3.10). The displacement of a large number of people, including entire communities, resulted in the transfer of a number of ritual practices and beliefs from one territory to another. However, these were transformed and adapted according to the new social conditions from Roman Moesia.

Key words. – Silver hoards, Moesia, Dacia, Tekija–Bare hoards horizon, Iron Gates region, Late Iron Age

---

The investigation of Late Iron Age silver hoards from the north of the lower Danube has a relatively long history, from the first discoveries of the 19th century to the specialist studies of the interwar and post-war periods, and to the more recent analyses and interpretations. Among the most representative publications are those authored by G. Téglas in 1911[1], N. Fettich[2], D. Popescu[3] and O. Floca[4] around the middle of the last century, K. Horedt in 1973[5], F. Medeleț[6] sometime later, and D. Spânu more recently[7]. A series of problems regarding their functions and chronology have also been re-analysed recently[8]. All of these contributions have defined the debates concerning the practice of burying "Dacian" hoards in general, and the ways in which silver body ornaments were assembled in this kind of archaeological context.

One problem that has constantly been debated concerns the chronological evolution of these hoards. K. Horedt was the first to use seriation to date these assemblages of body ornaments made of silver; his three chronological groups were subsequently adopted by F. Medeleț and, with some minor changes, also by V. V. Zirra and D. Spânu[9], and the author of this

[1] Téglas 1911.
[2] Fettich 1953.
[3] Popescu 1937–1940a; 1937–1940b; 1945–1947; 1958.
[4] Floca 1956.
[5] Horedt 1973.
[6] Medeleț 1977; 1993; 1994.
[7] Spânu 2012.
[8] Egri, Rustoiu 2014 and forthcoming.
[9] Zirra, Spânu 1992.

Manuscript received 21st February 2022, accepted 27th October 2022

Relative chronology	Horedt 1973		Spânu 2012; 2019		Rustoiu 2020	
LT D1	**Frühe Gruppe**	125 – 75 BC			**1**	150/125 – 75/50 BC
LT D2	**Mittlere Gruppe**	75 – 25 BC	**1**	80/70 – 30/20 BC	**2**	75/50 – 30/25 BC
Eggers B1	**Späte Gruppe**	25 BC – AD 25	**2**	30/20 BC – AD 20/50	**3**	30/25 BC – AD 25/30

Table 1. The main chronologies of Late Iron Age nord-danubian "Dacian" hoards

Табела 1. Основна хронолоīија за „дачке осшаве" у обласши северноī Подунавља, из ūериода Касноī īвозденоī доба

article[10]. Sometime later, D. Spânu changed his mind, opting to divide these hoards into just two chronological groups[11] (Tab. 1). I have recently argued against his interpretative model elsewhere[12], so the detailed analysis will not be repeated here (Tab. 2). It is, however, important to mention that:

1) The "Dacian" silver hoards have a relatively unitary structure from a functional perspective (Fig. 1);

2) They are specific to a particular geographic and cultural area that largely corresponds to the territory occupied by the Dacian kingdom (Fig. 2);

3) They are exclusively female sets of body ornaments;

4) They have a well-defined chronology, being used during the LT D and at the beginning of the Roman imperial period; the practice of burying such hoards ceased in the first half of the 1st century AD.

Within this seriation, the single hoard that does not fit into the proposed chronologies is the one discovered at Poiana–Gorj, a village that is now part of the town of Rovinari in Gorj County. Thus, in this article, the discovery is listed as coming from Rovinari–Poiana. Its inventory includes both Republican and Imperial denars, with the latest dated ones being issued by Domitian in AD 81[13]. K. Horedt has included this hoard in the latest dated third group together with other similar discoveries, such as the hoards from Bare and Tekija, both found south of the lower Danube in the Iron Gates area, which were dated to the second half of the 1st century AD. He has considered that in some cases costume accessories continued to be used over a longer period of time as "heirlooms"[14]. At the same time, F. Medeleț has suggested that the hoard from Rovinari–Poiana and those from Serbia belonged to a distinct fourth group of "Dacian" silver hoards[15]. Lastly, I. Popović has repeatedly suggested that the hoards from Serbia continued the tradition of the "Dacian" ones and were the starting point of a series of assemblages containing silver body ornaments that were widely distributed in the Roman provincial environment during the 2nd–3rd centuries AD. On the basis of these observations, she included them into the so-called group of Balkan – Danubian hoards[16]. D. Spânu, who ignores the Serbian hoards, has also noted that the hoard from Rovinari–Poiana does not fit into his chronological model, but has considered that it was just a later manifestation of a phenomenon that almost disappeared in the second half of the 1st century AD: "This decline could be correlated with the decreasing importation of Imperial coins issued between the reigns of Tiberius and Nero. However, this conjuncture reflects not only the limited access to the precious metal, but also the abandonment of the interest in symbolic representation by the local elites. The tradition of lavish displaying using original prestige objects diminished in the context of an increasing Roman influence on the lower Danube"[17] (translation AR). However, precisely in this period, in the 1st century AD, a series of hoards containing silver body ornaments appeared in Moesia Superior, in the area of the Danube's gorges, and more recently also on the lower Sava river. Most researchers consider that they have typological antecedents in pre-Roman Dacia. M. Guštin and I. Popović have recently named this group of discoveries the "Tekija–Bare hoards horizon"[18] (Fig. 2).

This horizon of hoards will be discussed below, the aim being to respond to a series of questions concerning their "Dacian" origin, their significance, and

---

[10] Rustoiu 2020.
[11] Spânu 2002; 2012; 2019a.
[12] Rustoiu 2020.
[13] Popescu 1937–1940b.
[14] Horedt 1973, 132, 151–152, Tab. 1.
[15] Medeleț 1993; 1994.
[16] Popović 1994a; 2004, 41–45; 2010a etc.
[17] Spânu 2012, 145.
[18] Guštin, Popović 2017, 54.

Hoards	Brooches (phalerae)	Brooches w/ knobs	LT D type brooches	Brooches w/ rhombic plate	Spoon-shaped brooches	Other types of brooches	Belts	Twisted bracelets	Bangles	Simple spiral bracelets	Spirals w/ palmettes	Bracelets w/ twisted ends	Earrings	Mastoi	Kantharoi	Late Republican vessels	Coins	Chronological groups
Bucuresti-H.	x									x				x		x	Th	
Lupu	x	x												x		x		
Sâncrăieni			x						x					x	x		Dy, Th	
Agârbiciu		x															Dy	
Cehei		x							x								Dy	
Clipicești		x					x										Th	
Tilișca 1		x					x	x										
Tilișca 2		x					x									Ag		
Drăgești		x						x									Dy, A, RD (75 BC)	1
Oradea 3		x																
Cojocna		x						x		x								
Săcălășău 1		?							x								Dy, A	
Săcălășău 2		x							x									
Cehetel		x	x						x	x								
Bistrita		x	x					x										
Sărmăsag		x	x						x	x		x						
Mediaș		x	x									x						
Sărăcsău		x		x				x										
Coldău			x								x	x						
Ghelinta			x								x						RD (67 BC)	
Sălistea			x	x								x						
Bălănesti				x							x	x	x					
Coada Malului				x							x							2
Saes				x														
Cadea				x							x						RD (41/38 BC)	
Cerbăl				x				x			x	x					RD (44/43 BC)	
Rociu				x							x	x	x				RD (81/76 BC)	
Izvoru Frumos				x							x						RD (81 BC)	
Vedea				x	x											Ag		
Remetea Mare				x	x	x			x		x	x					Th, RD (16/15 BC)	
Cetățeni				x													RD (8 BC)	
Seica Mică					x							x					RD (28 BC)	3
Peteni					x						x						RD (70/58 BC)	
Hetiur					x						x	x						
Senereuș					x						x	x						

Table 2. Chronology of the silver hoards from Late Iron Age Dacia (after: Egri, Rustoiu forthcoming and Rustoiu 2020)

Табела 2. Хронолоīија сребрних осīава из Дакије, из ūериода Касноī īвозденоī доба (ūрема Egri, Rustoiu (у шūамūи) и Rustoiu 2020)

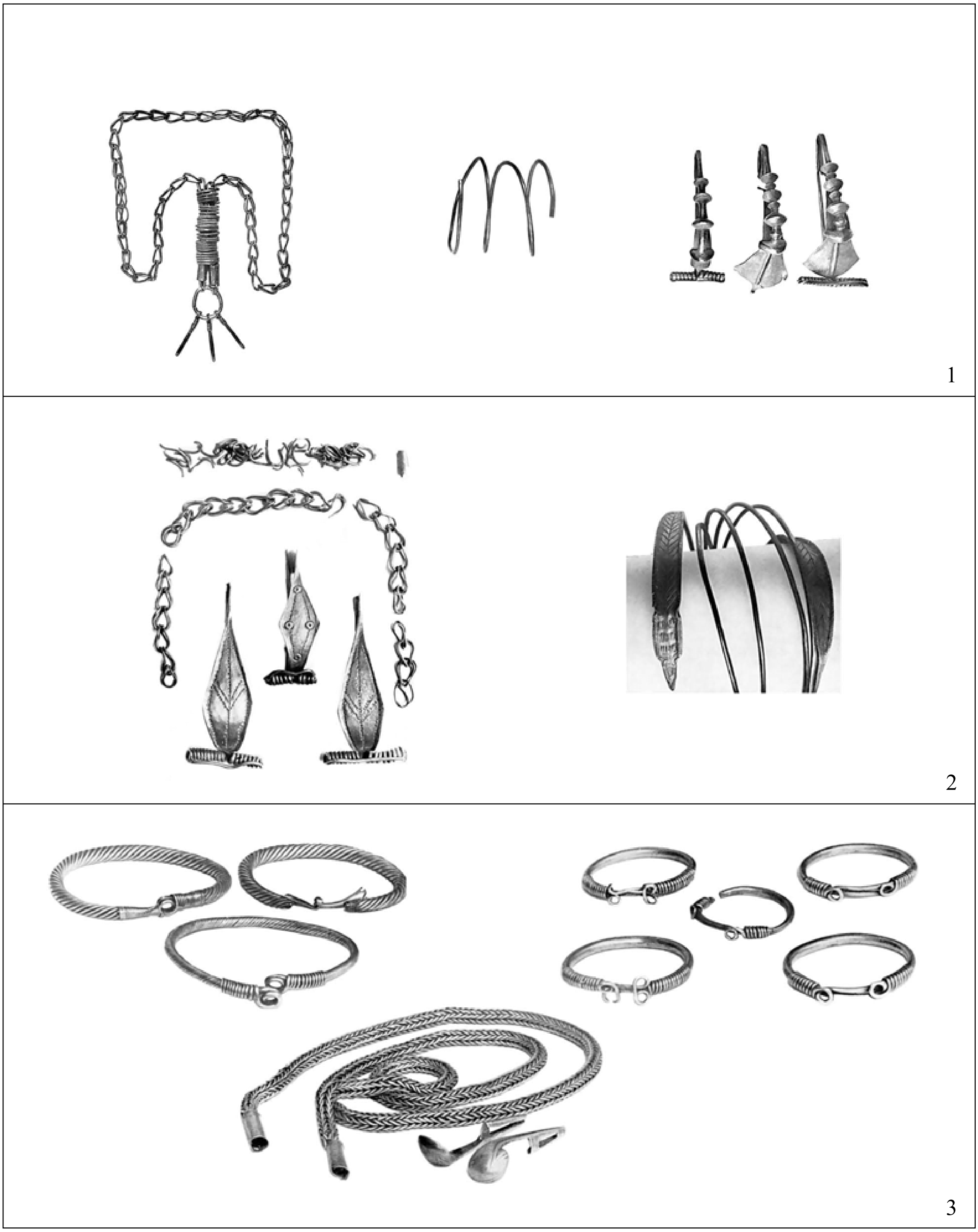


Fig. 1. Typical sets of Dacian body ornaments from horizons 1, 2 and 3:
1) Cojocna; 2) Cadea (both after: Fettich 1953); 3) Şeica Mică (after: Floca 1956)

Сл. 1. Уобичајени сеш дачкоī накиша из хоризонаша 1, 2 и 3:
1) Кожокна; 2) Кадеа (оба ӣрема Fettich 1953); 3) Шејка Мика (ӣрема Floca 1956)

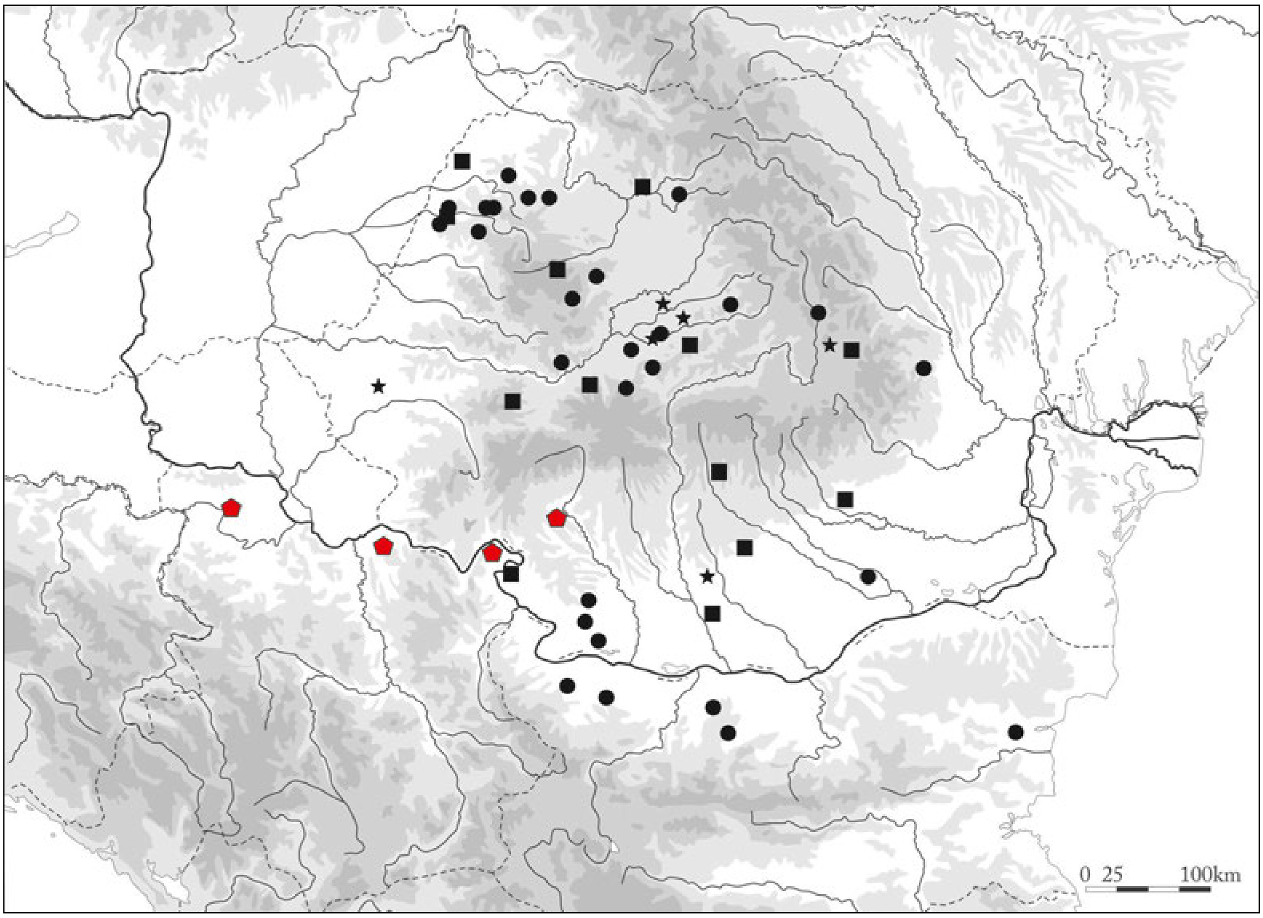


Fig. 2. Distribution map of the silver hoards in Late Iron Age Dacia (black dots – 1st horizon; black squares – 2nd horizon; black stars – 3rd horizon) and the horizon of Tekija – Bare hoards (red symbols)

Сл. 2. Карша расиросшрањеносши осшава сребра из иериода Касноī īвозденоī доба у Дакији (црни круīови – 1. хоризонш; црни квадраши – 2. хоризонш; црне звездице – 3. хоризонш) и хоризонш осшава Текија – Баре (црвене ознаке)

the manner in which this phenomenon emerged after the practice of burying assemblages of silver body ornaments had ceased to the north of the Danube one or two generations earlier. These hoards were discovered at Tekija (Transdierna) in 1948[19], Bare in 1964[20] and recently at Mačvanska Mitrovica[21]. Starting from them, the significance of the hoard from Rovinari–Poiana, discovered in 1938[22], can also be understood. Aside from these assemblages, there are some other similar silver artefacts that have an uncertain provenance, for example the rigid necklaces or rings with axe-shaped pendants from Ratiaria or Vladimirovo in north-western Bulgaria[23], and others kept in private collections or offered for sale on the antiquities market. These are not going to be discussed in detail here, but it is worth noting that some have recently been analysed[24].

Why are these hoards "Dacian"?

Even a brief examination of the hoards containing body ornaments that were dated either to the LT D or to the early Imperial period and were discovered in the nearby areas would indicate that no obvious similarities exist between them and the Moesian hoards, neither in the functional composition of the inventories, nor from a typo-morphological perspective.

19 Mano-Zisi 1957.
20 Popović, Borić-Brešković 1994.
21 Guštin, Popović 2017.
22 Popescu 1937–1940b.
23 Ruseva-Slokoska 1991, 131, cat. no. 71; 135, cat. no. 85.
24 Clesiu, Mirea 2019.



Fig. 3. The Židovar hoard (after: Jevtić et al. 2006)

Сл. 3. Остава из Жидовара (према Jevtić et al. 2006)

For example, the hoards from the "Scordiscian" environment (Fig. 3–4), like those from Kovin, Židovar, Jarak, Hrtkovci or Szárazd–Regöly[25], combine local costume accessories that are specific to the cultural area around modern Belgrade (middle LT brooches of the "Jarak type", plate belt buckles, anthropomorphic, zoomorphic or vegetal pendants etc) with others of Mediterranean origin (intertwined chains, toiletry objects, pyxides, etc). They are accompanied by artefacts made of different materials, for example beads made of glass or amber. These assemblages are markedly different from those from pre-Roman Dacia.

The hoards of body ornaments or the funerary inventories of the early Imperial period, which were discovered in Moesia, contain artefacts specific to the late Hellenistic jewellery-making style and the eastern Mediterranean environment of the early Empire (Fig. 5). This includes a preference for gold jewellery, which is absent in the "Dacian" or "Scordiscian" hoards. The individual female assemblages consist of earrings, various types of chains, bracelets and so on, all being frequently decorated with semiprecious stones, polychromy being one of the main characteristics of these finds[26].

From the typo-morphological perspective, the hoards belonging to the Tekija – Bare horizon contain a series of artefacts that are encountered in the northern Danubian hoards, a feature that was already noted by the majority of the researchers who investigated this subject (Fig. 6–7).

---

25 Rašajski 1961; Jevtić et al. 2006; Ljuština 2014; Guštin 1984; Dautova Ruševljan, Jevtić 2006; Rustoiu, Berecki 2014, 257, note no. 6, with previous bibliography.

26 Ruseva-Slokoska 1991; Popović 2010b etc.

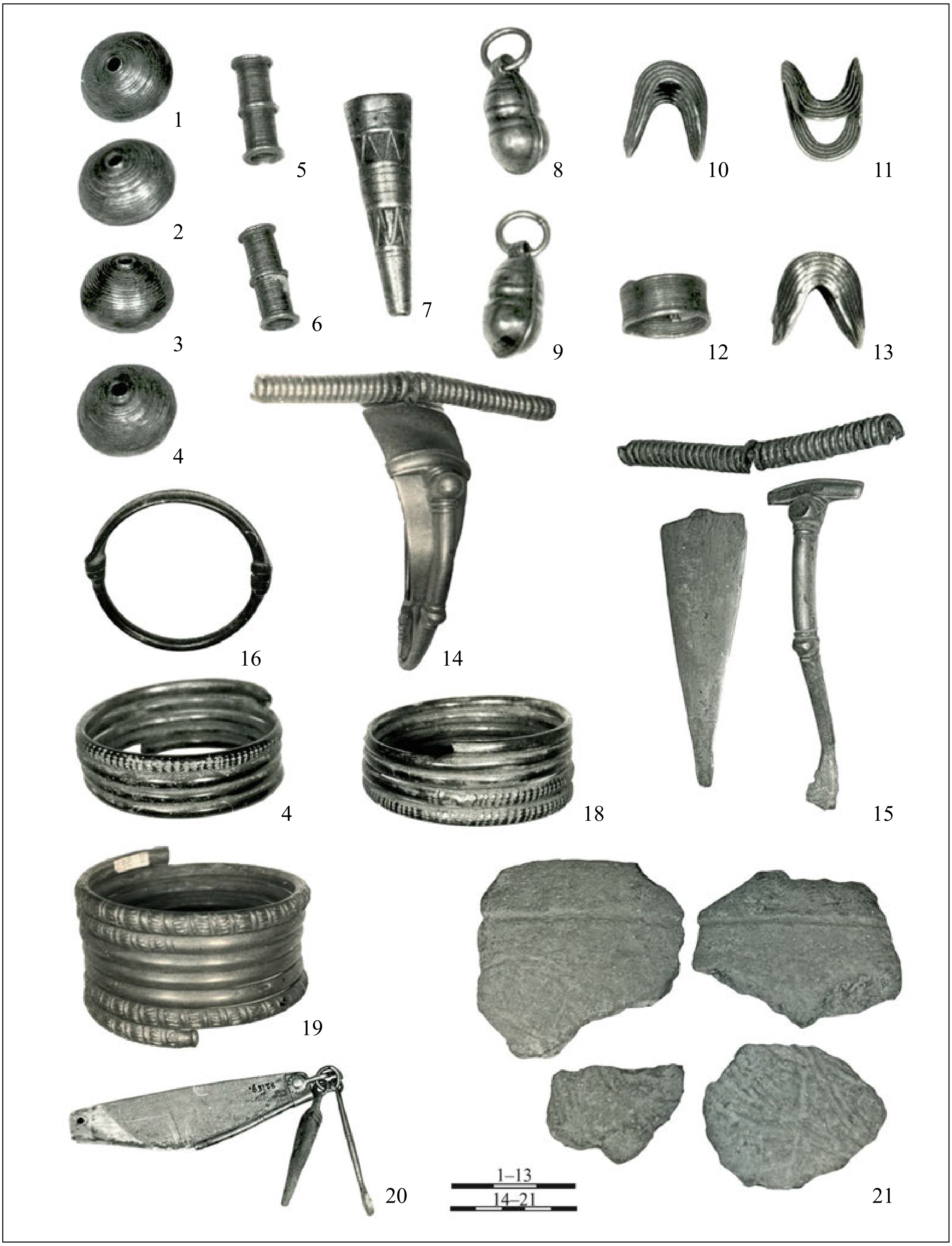


Fig. 4. The Kovin hoard (Museum of Vršac, photos F. Medeleț)

Сл. 4. Остава из Ковина (Музеј у Вршцу, снимио F. Medeleț)



Fig. 5. Gold jewellery from a burial in the cemetery at Ratiaria (after: Ruseva-Slokoska 1991)

Сл. 5. Злашан накиш из īроба са некройоле у Рацијарији (йрема Ruseva-Slokoska 1991)

The earrings having a conical or zoomorphic end, similar to those from Bare[27] or Rovinari–Poiana, and are commonly encountered in pre-Roman Dacia mainly during the 1st century AD[28], while the hair-lock spirals having zoomorphic ends, which are present at Bare, are specific to the second and third group of the “Dacian” silver hoards[29].

The rigid necklaces made of a single metal rod, sometimes twisted, or of several twisted silver wires, like those from Mačvanska Mitrovica, Bare or Rovinari –Poiana, are frequently encountered in hoards from pre-Roman Dacia, for example at Şeica Mică[30].

The bracelets with superposed and twisted ends, sometimes with attached axe-shaped pendants[31], are also commonly encountered in the northern Danubian hoards, with those from Şeica Mică[32] and Şaeş[33] offering close analogies.

The belts consisting of several rings with superposed and twisted ends, which are interlinked in different ways, are already attested in the first group of the “Dacian” silver hoards, for example at Tilişca[34] in Transylvania, Clipiceşti[35] to the east of the Carpathians, and Fântânele[36] in Oltenia.

On the other hand, the hoards from Moesia include a variety of ornaments for the chest, which is a particularity of the horizon in question. Some of these ornaments have antecedents in the northern Danubian

---

[27] While these artefacts have diameters that are similar to those of some bracelets, their features and some analogies suggest that they are more likely earrings.

[28] Rustoiu 1996, 102–104; 2002, 196, Fig. 12/23–29, 13/1–15.

[29] Rustoiu 1996, 108–109; 2020, 18, Tab. 1.

[30] Floca 1956, 25–26, Fig. 115–17, Pl. 30; see also Rustoiu 1987–1988.

[31] For the axe-shaped pendants, see Rustoiu 1996, 124; 2002, Fig. 11/1–3, 12/16–17; Guštin, Popović 2017, Fig. 10 (the most recent distribution map).

[32] Floca 1956, 26–29, Fig. 18–19, Pl. 31.

[33] Mărghitan 1976, Pl. 43/2.

[34] Lupu 1981, Fig. 3/4; see also Rustoiu 1996, 111–113.

[35] Mitrea 1972.

[36] Spânu 2012, Pl. 43.

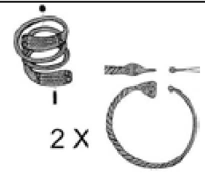
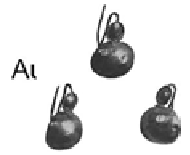
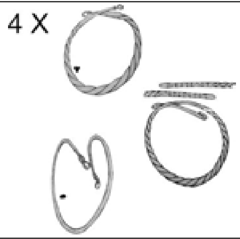
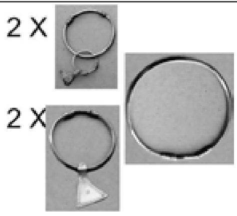
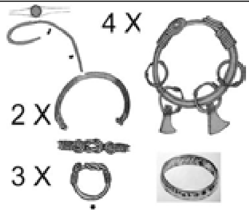
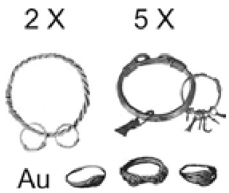
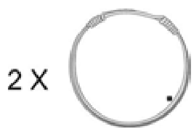
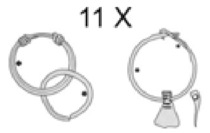
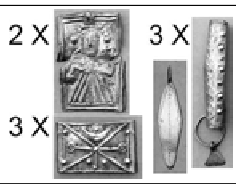
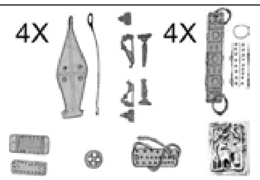
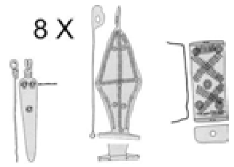
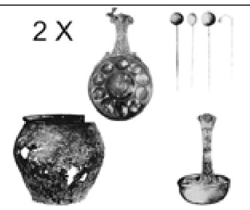
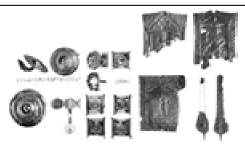
	Mačvanska Mitrovica	Bare	Tekija	Poiana (Rovinari)
Head				
Neck				
Arms				
Waist				
Chest				
Vessels				
Coins		Total: 279 (Rep.-Imp.)/Iast 81		Total: 23 (Rep.-Imp.)/Iast 81
Other				

Fig. 6. The hoards from Mačvanska Mitrovica (after: Guštin, Popović 2017), Bare (after: Popović, Borić-Brešković 1994), Tekija (after: Mano-Zisi 1957), Rovinari–Poiana (after: Popescu 1937–1940b), and their functional components

Сл. 6. Оставе из Мачванске Митровице (према Guštin, Popović 2017), Баре (према Popović, Borić-Brešković 1994), Текије (према Mano-Zisi 1957), Ровинари – Појане (према Popescu 1937–1940b) и њихови функционални делови

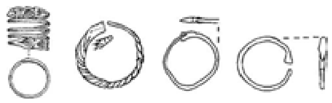
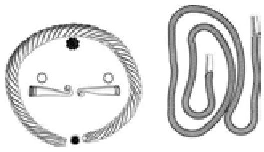
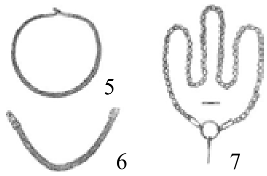
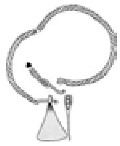
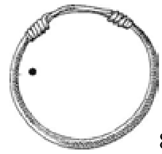
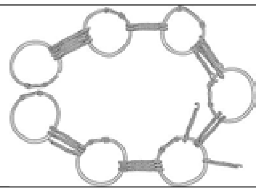
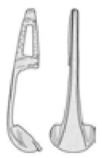
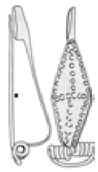
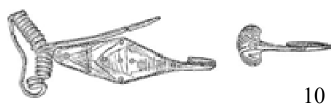
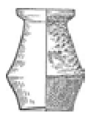
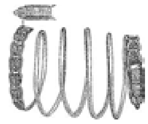
	Şeica Mică	Şaeş	Dacia
Head			 1 2 3 4
Neck			 5 6 7
Arms	5 × 		 8
Waist			 9
Chest	2 × 	5 × 	 10
Vessels			 11
Coins	356 rep./last 28 BC		
Other			 12

Fig. 7. The hoards from Şeica Mică (after: Floca 1956), and Şaeş (after: Mărghitan 1976), and silver jewelleries from other Dacian hoards and settlements: 1, 6–7, 11 – Vedea; 2–4 – various settlements; 5, 8, 10, 12 – Senereuş; 9 – Clipiceşti (1, 5–8, 10–12 – after: Mărghitan 1976; 2–4 – after: Rustoiu 1996; 9 – after: Spânu 2012)

Сл. 7. Осūаве из Шејка Мика (ūрема Floca 1956) и Шајш (ūрема Mărghitan 1976) и сребрни накиū из осūалих дачких осūава и насеља: 1, 6–7, 11 – Веgеа; 2–4 – различиūа насеља; 5, 8, 10, 12 – Сенереуш; 9 – Клиūикешūи (1, 5–8, 10–12 – ūрема Mărghitan 1976; 2–4 – ūрема Rustoiu 1996; 9 – ūрема Spânu 2012)

hoards. This is the case with the rhombic pendants whose shape and decoration point to the decorative features of some shield brooches[37]. Other pendants with an elongated leaf shape probably originated from the nail-shaped pendants[38].

Lastly, the hoards from Moesia, such as the northern Danubian ones[39], sometimes include metal vessels[40] and coins, the latter being dated between the late Republican period and the reign of Domitian. In this context, it is worth noting that the latest dated coins from Bare and Rovinari–Poiana were issued in AD 81, like in the case of the monetary hoard from Boljetin[41], also in the Danube gorges. Due to this dating, some researchers have considered that the hoards in question were buried during the military conflicts between the Dacians and the Romans under Domitian[42].

Unlike the northern Danubian hoards, those from Moesia also include some new elements, for example plaques with anthropomorphic or geometric decorations and small tubes. The hoard from Tekija stands out due to the presence of some gold ornaments (earrings and finger-rings), a military belt that belonged to *C. Valerius Crescens*, a soldier of *Legio VII Claudia*, and a number of small decorated silver plaques, which are usually votive offerings. Similar plaques have been found in the sanctuary of Dolichenus at Mauer an der Url, in Noricum[43], while others made of gold have been found at Germisara in Dacia, dedicated to the nymphs[44]. In this case the entire assemblage seems to be an accumulation of valuables that was hastily buried in a ca. 1.5 m deep pit under the floor of a rectangular room with a stone foundation, from the military camp at Tekija.

The presence of these new elements in the hoards from Moesia, and also of the artefacts originating from Italic or provincial workshops, reflects the evolution of the concept of ceremonial costume and its associated objects, which was related to the functions performed by their owners in the provincial environment of the second half of the 1st century AD.

WHEN AND WHY THESE HOARDS APPEARED IN MOESIA

The archaeological context

The area around the Danube’s Iron Gates functioned as a “contact zone”[45], both in the 1st century BC and later, when the Roman state controlled the entire lower Danube[46]. The communities inhabiting both banks of the Danube were permanently engaged in diverse networks of interaction, evidence being provided by the mixed ceramic repertoire. On both river banks, this repertoire includes elements of the typical “Dacian” tableware, for example the so-called fruit-bowls, and vessels specific to the “Scordiscian” environment, for example bowls with an S-shaped rim or large painted pots[47]. This could indicate a certain degree of hybridisation of the culinary and dining practices, which is commonly encountered in contact zones.

On the other hand, fortified settlements and fortresses are only encountered on the left bank of the Danube, from Židovar to Liubcova[48] (Fig. 8). These

---

37 Rustoiu 1997, Fig. 42/5–7.

38 Horedt 1973, 141–142, Type F1a–b, fig. 7.

39 Rustoiu 2020, 18, Tab. 1.

40 Janković 2014, 95, Fig. 9.1, has noted that the handles of some *paterae* from Tekija were decorated with axe-shaped pendants: “Such alteration has not been confirmed in any other form of Roman material culture, so we must assume that it was a local practice”. In my opinion, this local practice could have been related to the magical function that these pendants may have had. Regarding the Bare hoard, among other things, it includes a medallion with an anthropomorphic decoration (different Mediterranean deities being identified) that resembles a *phalera*. I. Popović has suggested that the medallion was attached to the bracelet with snake-shaped ends that was also part of the hoard (Popović 1997, 73–79). She has also noted that the artefact in question resembles the medallions that decorate the interior base of some late Hellenistic or early Imperial metal vessels, thus considering it an imitation of such pieces (Popović 1997, 76–77). In my opinion, the medallion from Bare was more likely used initially as a decorative element of a metal vessel and was later reused, being adapted to the bracelet with snake-shaped ends in the manner suggested by I. Popović. For medallions with similar dimensions, see, for example, one piece discovered in the so-called *Casa del Menandro* at Pompei, with a diameter of 4.8 cm, and 5.8 cm together with the attaching ring frame (Painter 2001, M 14, 63, pl. 14/1; see also the medallions on vessels from the Berthouville hoard: Lapatin 2014). The reuse of similar medallions for different purposes is also attested in this period, in different archaeological contexts (see, for example, Treister 2016).

41 Guštin, Popović 2017, 55.

42 See, for example, Popović 1997, 79, and Guštin, Popović 2017, 55, noting that these hoards are “a significant archaeological source for detection of probable military events in the winter of 81/82, or in a later period…”

43 Noll 1980.

44 Piso, Rusu 1990; Piso 2015.

45 For the concept of “contact zone” and its applications in archaeology, see Egri 2018 with previous bibliography.

46 See further Egri 2014; 2018; 2019; Drăgan 2020.

47 Drăgan 2020, 46–66, 119–142.

48 Rustoiu 2005; Rustoiu et al. 2017; Drăgan 2020. Despite the common opinion that the settlement at Židovar was fortified, M. Ljuština told me recently that the latest excavations have not confirmed the presence of any defensive elements (see also Ljuština 2014,



Fig. 8. Types of archaeological sites and discoveries from the Iron Gates region (after: Drăgan 2020)

Сл. 8. Врсӣе археолошких налазишӣа и налаза у обласӣи Ђердаӣа (ӣрема Drăgan 2020)

delimit, both culturally and socially, the extension of the Dacian kingdom. At the same time, cremation graves containing weaponry and other features specific to the Padea–Panaghiurski kolonii-type burials are also attested. One relevant example is offered by the grave from Dubova[49] (Fig. 9/2).

On the opposite river bank are attested only rural settlements and flat cremation burials, which are structurally different from those identified in Dacia, despite containing weaponry (Fig. 9/1). For example, harness fittings are missing (Fig. 9/3), so the social identity of the deceased was not defined by horse riding, as in the case of the martial elites from the north of the river[50].

Therefore, the spatial organisation of the landscape and habitation, and the funerary practices, points to some important differences between the communities living on each bank of the Danube. These differences are also visible in the structure of the ceremonial costume assemblages.

As already mentioned above, the distribution area of the hoards containing “Dacian” silver artefacts covers almost exclusively the inner Carpathian region and that between the southern Carpathians and the lower Danube. East of the Carpathians, the practice of burying silver hoards is rarely encountered[51], despite some recent discoveries[52], whereas south of the Danube the same practice is also rarely attested[53].

A number of relevant discoveries are known from the Iron Gates area, on the left bank of the Danube.

22–223: “up to now …no trace of fortification has been recognised”). Concerning this question, V. D. Mihajlović and M. A. Janković write: “Having in mind the destructive effects of erosion caused by rains and strong winds, the lack of reliable traces of enclosure is not an unexpected situation” (2021, 815). However, the morphological layout of the site location (a high terrace with steep slopes), the general situation observed in other similar settlements from the Iron Gates region (which were all fortified), and the analogies offered by other quite similar settlements that I have investigated over the years (for example Sighişoara-Wietenberg in central Transylvania, or Solotvino in Transcarpathian Ukraine), which had at least some double palisades on the limits of the inhabited plateaus, lead me to consider that the defensive elements of the settlement at Židovar will be most likely identified by future archaeological excavations.

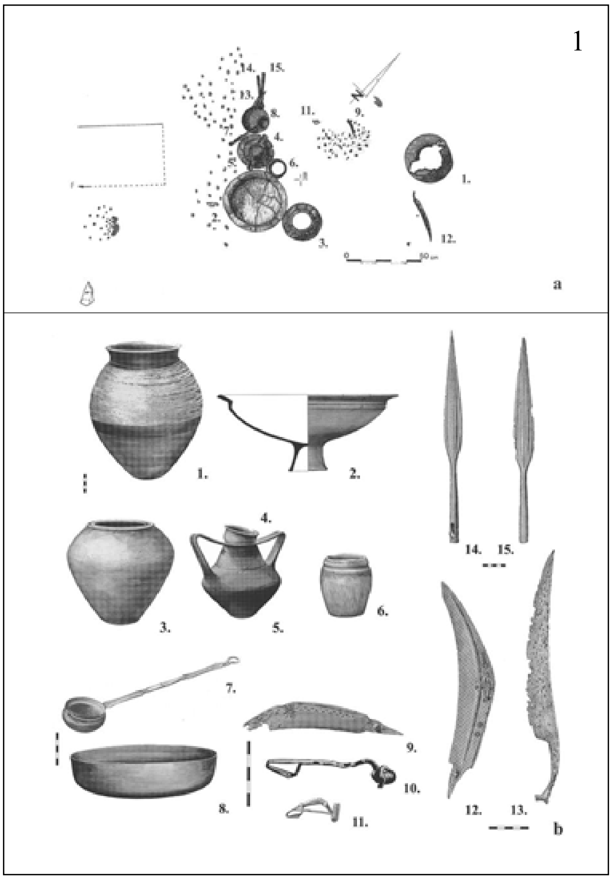
[49] Spânu 2001–2002; Rustoiu 2019, 214–217.

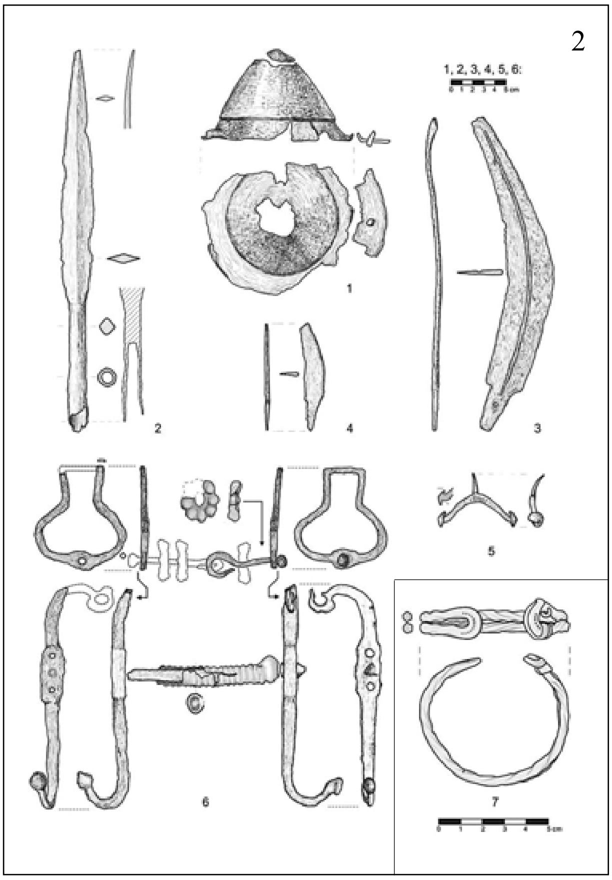
[50] Drăgan 2020, 79–81, Fig. 56.

[51] Rustoiu 2002.

[52] One hoard of silver body ornaments has recently been discovered at Cândeşti, not far from the “Dacian dava” at Cârlomăneşti: information S. Matei (Museum of Buzău).

[53] Spânu 2012, Pl. 1.





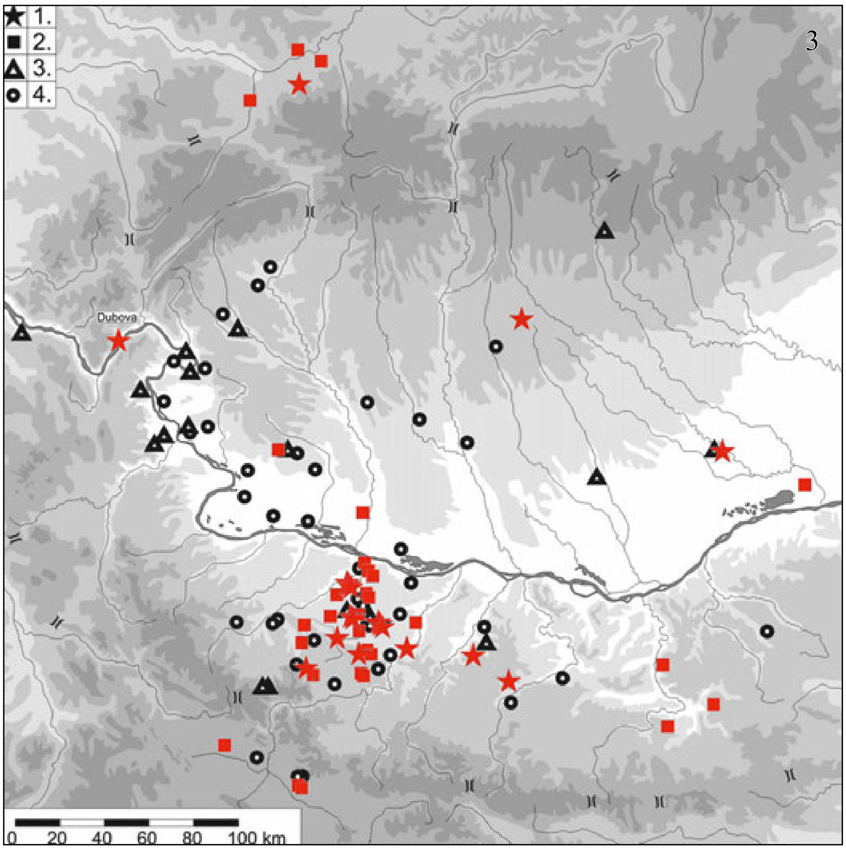


Fig. 9. Funerary discoveries in Iron Gates region: 1. Mala Vrbica–Ajmana (after: Stalio 1986); 2. Dubova (after: Spânu 2001–2002); 3. Distribution map of graves with weapons: red symbols indicate the presence of harness fittings (after: Drăgan 2020)

Сл. 9. Гробни налази у области Ђердапа: 1. Мала Врбица–Ајмана (према Stalio 1986); 2. Дубова (према Spânu 2001–2002); 3. Карта распрострањености гробова са оружјем: црвени симболи означавају присуство коњске опреме (према Drăgan 2020)

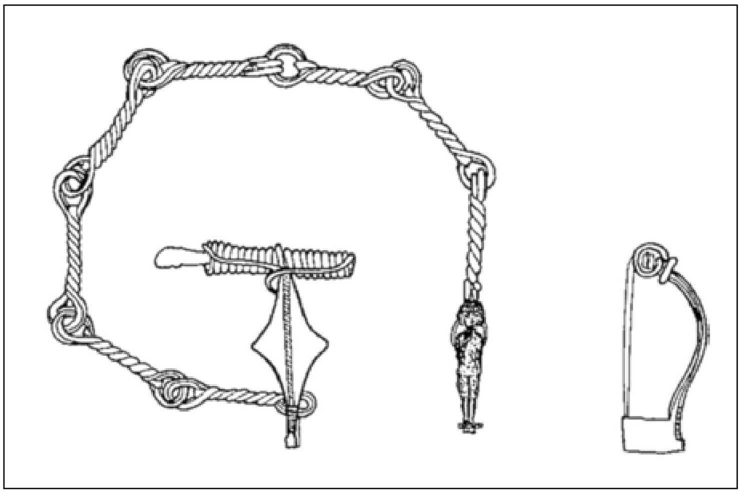


Fig. 10. The silver shield-type brooch and chain from Kladovo, with a bronze pendant representing the god Harpocrates (after: Popović 1994b)

Сл. 10. Сребрна фибула у облику шӣиӣа и ланац из Кладова, са бронзаним ӣривеском са ӣредсӣавом боīа Харӣокраӣа (ӣрема Popović 1994b)

Among them are the hoard from Izvoru Frumos[54], which was dated to the Augustan period, and the Transylvanian bracelet from a grave with weaponry discovered at Dubova; a recent re-examination of the latter artefact has demonstrated that it was not part of the personal inventory of the deceased, but the possible result of some magical rituals[55]. Other examples include the nail-shaped pendant from the settlement at Liubcova[56] and the hair-lock spirals decorated with stamped palmettes from the second phase of the LT settlement at Židovar[57]. These discoveries again demonstrate that the respective female costume assemblages belonged to the “Dacian” environment from the north of the Danube.

A number of isolated discoveries that belong to the last two groups of the northern Danubian hoards appeared sporadically in the same Iron Gates area, but on the right bank. These include a spiral with stamped palmettes that was discovered in unknown circumstances at Velika Vrbica[58], a brooch with a rhombic shield from Mala Vrbica–Konopiste[59] and a brooch with a chain made of twisted segments, from Kladovo[60] (Fig. 10). The latter find, dated to the Augustan reign, was used over a longer period, based on the dating of the anthropomorphic pendant depicting Hippocrates that was attached to the other end of the chain, probably replacing another brooch that was most likely identical to the preserved one[61].

It can, therefore, be said that there are very few antecedents for the Moesian hoards. Consequently, a short overview of the historical evolution of the region in question may contribute to a better understanding of the social-political and cultural context in which these hoards could have emerged.

The Iron Gates region from Augustus to Trajan

In a polemic paragraph, Strabo (VII.3.10) mentions briefly that “in our own times Aelius Catus has removed from the opposite side of the Danube into Thrace fifty thousand Getae, who speak a language cognate with Thracian. They still inhabit the very spot, and pass by the name of Moesi”[62]. This paragraph has been widely discussed in archaeological literature,

---

54 Stângă 1992; Spânu 2012, Pl. 64; Drăgan 2020, 84–87.

55 Rustoiu 2019, 214–217.

56 Rustoiu et al. 2017, Fig. 13.

57 Jevtić 2007, 11, Fig. 7.

58 Medeleț 1993; 1994.

59 Popović P. 1989–1990.

60 Popović I. 1994b.

61 The artefact in question was acquired by the National Museum of Belgrade in 1930, together with other silver artefacts discovered in unknown circumstances at Kladovo. These include a torque, two bracelets (or earrings?) with snake-shaped ends, and a pair of strongly profiled brooches with the spring covered by a semi-circular shield. Since there is no information regarding their context of discovery, I. Popović has expressed significant reservations about the possible identification of a unitary assemblage of body ornaments (Popović 1994b, 70). Nonetheless, if these are elements of a single costume assemblage, this should be dated to the first half of the 2nd century AD, based on the chronology of the brooches (Cociș 2004, 62–63, Type 8a15).

62 Trad. Hamilton, Falconer 1903 (http://www.perseus.tufts.edu/hopper/text?doc=urn:cts:greekLit:tlg0099.tlg001.perseus-eng2:7.3.10; accessed 18.02.2022). Mócsy 1974, 36–37, has noted that one method used during the Augustan period to consolidate the Roman authority was the displacement of entire communities from one territory to another. Therefore, the relocation of some Dacian communities south of the Danube was not an exceptional action; for other Roman strategies of expanding imperial authority on the middle and lower Danube, see Egri 2019.

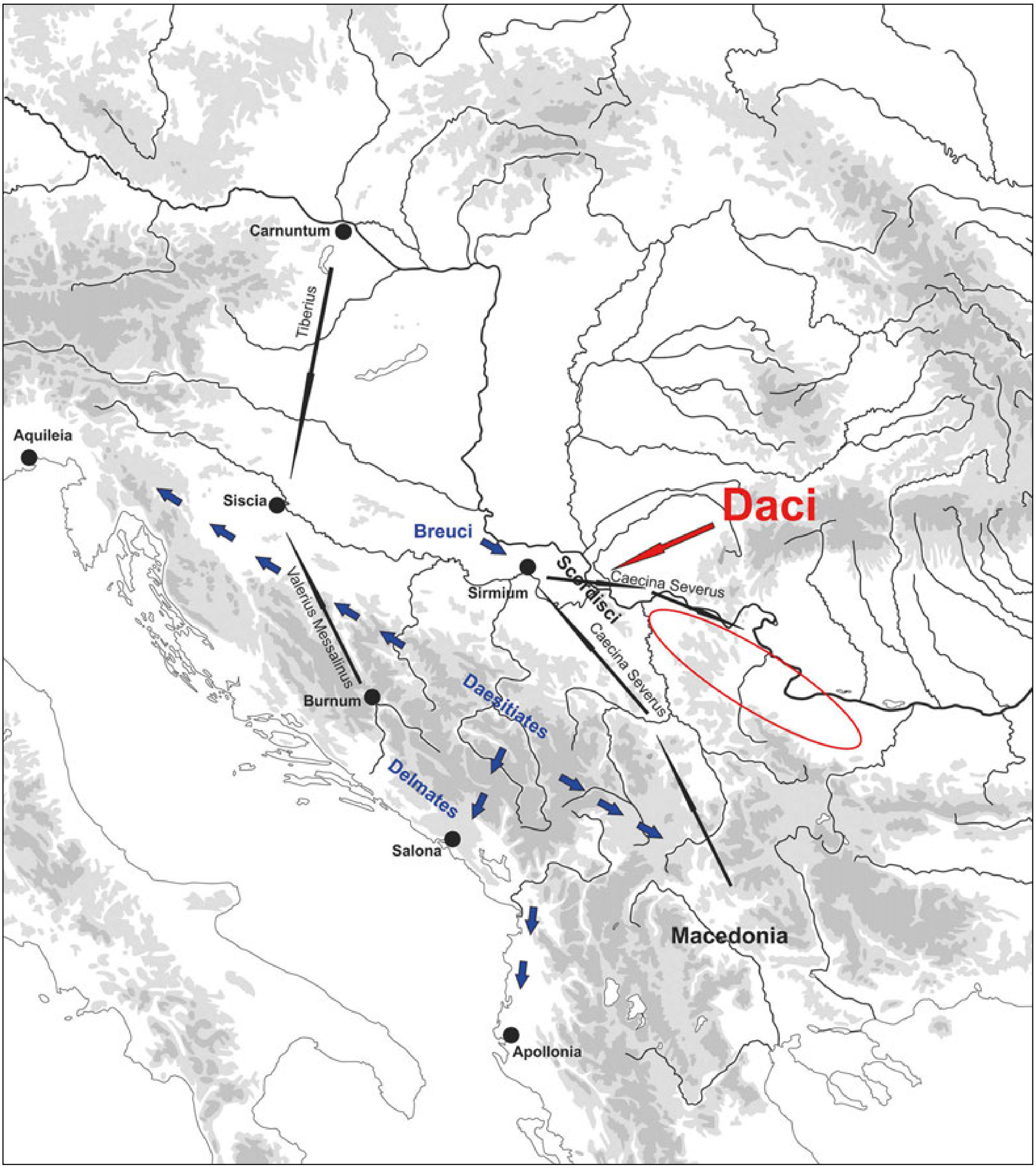


Fig. 11. Pannonian revolt from AD 6–9 (Bellum Batonianum): black arrows – direction of action of the Roman army; blue arrows – direction of action of the rebels; red arrow – Dacian and Sarmatian attack; red line zone – the territory south of the Danube on which northern Dacians were relocated (by Aelius Catus, according to Strabo); from the same territory come the military diplomas mentioning the Dacians recruited in the Roman army from Nero to Trajan

Сл. 11. Панонски усūанак из 6–9. īодине н.е. (Bellum Batonianum): црне сīрелице – ūравац нaūада римске војске; ūлаве сīрелице – ūравац нaūада усūаника; црвена сīрелица – дачки и сармаūски нaūад; зона црвених линија – обласū јужно од Дунава на коју су ūресељени северни Дачани (код Елијуса Каūуса, ūрема Сūрабону); из исūе обласūи ūоūичу војничке диūломе у којима се сūомињу Дачани реīруūовани у римску војску, у ūериоду од Нерона до Трајана

and since Vasile Pârvan[63] until very recently[64], Romanian historiography commonly located the intervention of the governor of Macedonia in the Wallachian Danube’s area (east of the confluence of the Olt River with the Danube).

On the other hand, Doina Benea suggested two decades ago that the events in question must have happened somewhere in western Dacia and on the territory of the future province of Moesia Superior[65]. The episode mentioned by Strabo took place in the context of the Pannonian and Dardanian revolt in AD 6, when the Breuci led by Bato attacked Sirmium (Fig. 11). A. Cecina Severus, the commander of the Macedonian army, was sent to punish them, with the cavalry of King Rhoemethalces as allied troops. At the same time or shortly afterwards, the Dacians and the Sarmatians also attacked the territories of the Roman allies in this region[66]. As a representative of Aelius Catus, the governor of Macedonia, A. Cecina Severus, had to intervene and establish order[67]. The displacement of a large number of northern Danubian Dacians to the south of the river, in territories controlled by the Romans, must have been pursued in this political and military context. Consequently, the events could only have happened somewhere in western Dacia, either in southern Banat or in the Iron Gates region and western Oltenia (Fig. 11).

Coincidentally or not, the Dacian fortresses and settlements in the Iron Gates region were all destroyed violently at the beginning of the 1st century AD[68]. Although many were subsequently reconstructed, the fortified settlement at Liubcova was definitively abandoned after these events. During the same period, both on the right bank of the Danube[69] and deeper inland, for example at Paraćin in the middle Morava basin[70], new settlements appeared whose inventories included kitchenware and tableware specific to the northern Danubian ceramic repertoire. The appearance of these settlements has been related to the displacement of Dacian communities in Moesia during the Augustan period or later, during the reign of Nero[71].

Lastly, a number of military diplomas recently discovered through illegal means in north-western Bulgaria, and perhaps also in eastern Serbia, mention the recruitment of soldiers of Dacian origin in the fleet or the auxiliary units as early as the Claudian times and then also later, during Trajan’s Dacian wars[72]. These Dacians came from the south of the Danube, from the regions close to the Iron Gates, so they were most likely descendants of those brought by the Romans to Moesia at the beginning of the 1st century AD[73].

The movement of entire communities south of the Danube also implied the transfer of many practices and customs from the homeland, if these did not contravene the Roman norms. For example, there were no fortified settlements, cult structures, human sacrifices or “invisible” funerary practices of the kinds encountered on the territory of the Dacian kingdom. On the contrary, proper burials in structured cemeteries reappeared among these communities, as would also happen later in Roman Dacia. The deceased were cremated, the remains being then placed in urns or simple pits. A number of cemeteries and cremation burials from the Iron Gates region or the Morava Valley were ascribed to these Dacian communities moved to the south of the Danube[74].

Among the customs preserved by these communities is the use of particular sets of body ornaments made of silver. The brooch from Kladovo with a rhombic shield and a chain made of twisted segments that most likely had a similar brooch attached to the other end belongs typologically to the second or third group of the northern Danubian silver hoards[75] (Fig. 10). The brooch must have arrived south of the river with a displaced Dacian community, and was used there over a longer period. Its original meaning was transformed through the attachment of the anthropomorphic statuette depicting an Oriental divinity that was also worshipped in the province. Other silver artefacts, like the similar brooch from Mala Vrbica–Konopiste or the spiral with stamped palmettes from Velika Vrbica, which have been mentioned above, must have travelled through the same means south of the Danube.

63 Pârvan 1926, 94–95.

64 Daicoviciu 1972, 117–118; Vulpe 1976, 132–133; Rădulescu 2001, 665; Petolescu 2001, 718, note 1 etc.

65 Benea 1989.

66 These allies of the Romans could only have been the Scordisci, who a few years earlier fought alongside Tiberius during the Pannonian war of 12 BC, see Dzino 2010, 128–129.

67 For events connected with the Pannonian and Dalmatian revolt, see Mócsy 1974, 37–39; Dzino 2010, 137–155; Šašel Kos 2011, 110–112.

68 Rustoiu et al. 2017.

69 Drăgan 2020, 89–150.

70 Filipović et al. 2019.

71 Filipović et al. 2019, 125–126, with previous bibliography.

72 Dana, Matei-Popescu 2006; 2009; Matei-Popescu 2017.

73 Matei-Popescu 2017, 141–142.

74 Jovanović (A.) 2000.

75 Horedt 1973, 132, Tab. 1; Rustoiu 2020, 18, Tab. 1.



Fig. 12. Silver plaques showing female characters:
1. Mačvanska Mitrovica (after: Guštin, Popović 2017); 2–3. Lupu (2 – after: Spânu 2012; 3 – photo: A. Rustoiu)

Сл. 12. Сребне ӣлоче са ӣредсӣавама женских ликова:
1. Мачванска Миӣровица (ӣрема Guštin, Popović 2017); 2–3. Луӣу (2 – ӣрема Spânu 2012; 3 – снимио A. Rustoiu)

On the other hand, the original meanings and functions attached to these sets of body ornaments were most probably transformed south of the Danube through time. In Dacia, these sets of ornaments were used by women who fulfilled certain ritual roles and were sometimes associated with the warlike elites. When they died, their body was treated in a way that left almost no archaeological traces, but the respective sets of body ornaments and other objects related to the ritual role of their owners, for example metal or ceramic drinking-related vessels, were transferred from the world of the living into the afterworld by mutilating and burying them in pits located on sacred areas within the community's territory[76].

In the case of the hoards from Moesia, the manner in which the women wearing these sets of body ornaments were treated upon death probably had to largely conform to the funerary norms of the province. However, other ritual traditions seem to recall older practices from pre-Roman Dacia, albeit transformed or reinvented in the second half of the 1st century AD. The inventories of these hoards always include anthropomorphic images (Fig. 12). Some are stylistically close to the images from pre-Roman Dacia, for example those on the *phalerae* from Lupu, in Transylvania[77] (Fig. 12/2–3). Others belong to the Hellenistic or Roman repertoire, as in the case of the medallion of a vessel from Bare or the votive plaques from Tekija. At the same time, some of the hoards from Moesia include sets of vessels, just like the Dacian ones. Lastly, they tend to appear in the vicinity of military forts, which could perhaps hint at older connections between the wearers of these costumes and the warlike elites. At Tekija, this association is suggested not only by the context of discovery, but also by the inclusion of military equipment.

Regarding the burying time of the Moesian hoards, the situation from Tekija seems to confirm the general hypothesis that they were hidden in the context of the Dacian wars under Domitian, which is suggested by the latest dated monetary issues. However, it is also possible that they were buried at different dates. The hoard from Rovinari–Poiana, whose composition is similar to those from Moesia, was more likely hidden at a time when the territory of Oltenia was controlled by troops from Moesia, maybe during the reign of Domitian, or more likely during Trajan's Dacian wars[78]. The hoard could have been brought to the north of the Danube in a period in which Oltenia depended in one way or another on the southern Danubian province, or even later, when it was already part of Roman Dacia. Only this hypothesis could explain the presence of this kind of hoard north of the Danube in a period in which the aforementioned Dacian silver hoards had ceased to be used more than half a century earlier.

Conclusions

As already noted by some specialists and further demonstrated above, the so-called Tekija – Bare group of hoards originates from the northern Danubian hoards containing silver body ornaments. This is demonstrated by the typology of some silver costume accessories and the tradition of burying them together with silver coins and metal or ceramic vessels.

The appearance of these hoards south of the Danube in the second half of the 1st century AD was the result of the revival of some northern Danubian ritual practices. This revival can be ascribed to the "Getae", who were moved to the south of the river by Aelius Catus at the beginning of the 1st century AD and were later known as the Moesi, according to Strabo (VII.3.10). The displacement of a large number of people, including entire communities, resulted in the transfer of a number of ritual practices and beliefs from one territory to another. However, these were transformed and adapted according to the new social conditions from Roman Moesia. It can, therefore, be said that the structure and composition of the hoards of the Tekija – Bare type suggest that a number of practices originating from the area of the Dacian kingdom were preserved and revived south of the Danube in a period in which these had already been abandoned one or two generations earlier north of the river.

The reinvention of these traditions could also be related to the integration of these communities into the

[76] Egri, Rustoiu 2014 and forthcoming.

[77] Guštin, Popović 2017, 56. For the hoard from Lupu, see Glodariu, Moga 1994.

[78] Perhaps already during the reign of Domitian, but surely after the first Dacian war under Trajan, the territory of Oltenia was organised as a military district controlled by the army of Moesia. The Hunt papyrus (British Museum 2851), dated either to AD 99 or later, to AD 105–106, mentions the presence of some detachments of *Cohors I Hispanorum veterana*, which belonged to the army of Moesia Inferior, to the north of the Danube at Buridava in Oltenia and Piroboridava on the Siret river, east of the Carpathians: see Vulpe 1976, 154–155, with older bibliography; Matei-Popescu 2010, 215–218.

[79] Ettlinger 1973, Type 3, 5–6; Riha 1979, Type 1.4; Feugère 1985, Type 3.

social life of the adoptive province. According to a series of military diplomas, some members of these communities were recruited into the Roman army. They still had Dacian names and their ethnic identity is clearly stated in these diplomas. Their honourable discharge from the army, probably under Vespasian, bringing home all of the privileges offered to the veterans, most likely contributed to the construction of a particular identity that incorporated some traditional elements, as well as others resulting from the interaction with the Roman authorities and other social or ethnic groups from the province. In this context, the use of ceremonial costumes including body ornaments specific to the "Dacian" environment together with the adaptation of a series of older ritual practices to the provincial social norms must have played an important role.

This kind of return to older traditions among the indigenous communities from the provinces has also been noted in other situations. One example is the reappearance in the Alpine or northern Alpine provinces of some costume accessories with "archaic" features that predate the organisation of the respective provinces by a few generations. Among them are some types of middle La Tène brooches, which have been discovered in contexts dated to the 1st century AD from Gallia to Noricum and even further to the east[79], aiming to recall some of the style of body ornamentation of the ancestors. This is not unlike our taste for "retro" fashion. Other examples include the appearance in the north-eastern Alpine area of some strongly profile brooches whose bow bears zoomorphic decorations[80] or the composition of the female Norican – Pannonian costume[81], all of which illustrate the revival of some styles of body ornamentation that predate the organisation of the respective provinces.

Therefore, the appearance of the hoards of the Tekija – Bare type is part of the same phenomenon of revival and reinvention of certain ancestral traditions within the Roman provincial environment. The hoard from Rovinari–Poiana, which belongs to the same group, must have been assembled south of the Danube, in the particular environment discussed above. The hoard could have arrived on the mentioned site across the river only when the territory of Oltenia was already controlled by the army of Moesia Inferior or after its inclusion into Roman Dacia.

Lastly, this group of hoards of the Tekija–Bare type contributed, as I. Popović has already mentioned, to the evolution of the Balkan – Danubian hoards containing costume accessories made of silver in the provincial environment of the 2nd–3rd centuries AD.

Acknowledgements

This work was supported by a grant of the Romanian Ministry of Education and Research, CNCS – UEFISCDI, project number PN-III-P4-ID-PCE-2020-0566, within PNCDI III.

[80] Demetz 2000; Spânu 2019b.
[81] Garbsch 1965.

BIBLIOGRAPHY:

Benea 1989 – D. Benea, Contribuții la istoria relațiilor politice dintre Imperiul Roman și geto-daci (expediția lui Aelius Catus). *Apulum* 26 1989, 147–159.

Cleșiu, Mirea 2019 – S. Cleșiu, D.-A. Mirea, Obiecte de port și podoabă din epoca romană timpurie aflate în colecția "Maria și George Severeanu". Tradiții și influențe. *Revista de cercetări arheologice și numismatice* 5 2019, 181–214.

Cociș 2004 – S. Cociș, *Fibulele din Dacia romană*, Cluj–Napoca 2004.

Daicoviciu 1972 – H. Daicoviciu, *Dacia de la Burebista la cucerirea romană*, Cluj 1972.

Dana, Matei-Popescu 2006 – D. Dana, F. Matei-Popescu, Le recrutement des Daces dans l'armée romaine sous l'empereur Trajan: une esquisse préliminaire. *Dacia* N. S. 50 2006, 195–206.

Dana, Matei-Popescu 2009 – D. Dana, F. Matei-Popescu, Soldats d'origine dace dans les diplômes militaries. *Chiron* 39 2009, 209–256.

Dautova Ruševljan, Jevtić 2006 – V. Dautova Ruševljan, M. Jevtić, Silver jewelry of Hellenistic and Celtic type from Hrtkovci in Srem. *Starinar* 56 2006, 291–307.

Demetz 2000 – S. Demetz, Fibeln mit beissendem Tierkopf (TKF-Tierkopffibeln). *Sbornik Národniho Muzea v Praze* 54 2000, 15–36.

Drăgan 2020 – A. Drăgan, *Living on the river. A study of the interactions in the Lower Danube Gorge during the Late Iron Age and Early Roman Times*. Cluj-Napoca 2020.

Dzino 2010 – D. Dzino, *Illyricum in Roman politics 229 BC – AD 68*. Cambridge 2010.

Egri 2014 – M. Egri, Desirable goods in the late Iron Age – The craftman's perspective, in: *Iron Age Crafts and Craftsmen in the Carpathian Basin.* Proceedings of the International Colloquium from Târgu Mureş, 10–13 October 2013, (ed.) S. Berecki, Târgu Mureş 2014, 233–248.

Egri 2018 – M. Egri, Contact zones and negotiated periphery – Meanings and functions in the Eastern Carpathian Basin, in: *Iron Age Conectivity in the Carpathian Basin*. Proceedings of the International Colloquium from Târgu Mureş, 13–15 October 2017, (ed.) S. Berecki, M. Egri, A. Rustoiu, Cluj-Napoca 2018, 99–118.

Egri 2019 – M. Egri, *Connectivity and social dynamics in the Carpathian Basin (1st century BC – 1st century AD). An archaeological investigation*. Cluj–Napoca 2019.

Egri, Rustoiu 2014 – M. Egri, A. Rustoiu, Sacred conviviality in the Lower Danube region. The case of the Sâncrăieni hoard. *Studia Universitatis "Babeş-Bolyai"*. Historia 59.1, 2014, 153–188.

Egri, Rustoiu forthcoming – M. Egri, A. Rustoiu, Late Iron Age silver hoards from Dacia, in: *Hoarding and deposition in Europe from later prehistory to the medieval period. Finds in context*, (ed.) E. Durham et al., Monographies Instrumentum, forthcoming.

Ettlinger 1973 – E. Ettlinger, *Die römischen Fibeln in der Schweiz*. Bern 1973.

Fettich 1953 – N. Fettich, Archäologische Beiträge zur Geschichte der sarmatisch-dakischen Beziehungen. *Acta Archaeologica Academiae Scientiarum Hungaricae* 3 1953, 127–178.

Feugère 1985 – M. Feugère, *Les fibules en Gaule méridionale*. Paris 1985.

Filipović et al. 2019 – V. M. Filipović, O. D. Mladenović, V. P. Vučković, Archaeological site of Bolnica in Paraćin and its importance for the prehistory of central Morava region. *Starinar* 69 2019, 113–138.

Floca 1956 – O. Floca, *Contribuţii la cunoaşterea tezaurelor de argint dacice*. Bucureşti 1956.

Garbsch 1965 – J. Garbsch, *Die norisch-pannonische Frauentracht im 1. und 2. Jahrhundert*. München 1965.

Glodariu, Moga 1994 – I. Glodariu, V. Moga, Tezaurul dacic de la Lupu, *Ephemeris Napocensis* 4 1994, 33–48.

Guštin 1984 – M. Guštin, Die Kelten in Jugoslawien. Übersicht über das archäologische Fundgut. *Jahrbuch des Römisch-Germanischen Zentralmuseums Mainz* 31 1984, 305–363.

Guštin, Popović 2017 – M. Guštin, I. Popović, Early Roman hoard from Mačvanska Mitrovica (?). Contribution to the precious silver metal working cultural koiné. *Starinar* 67 2017, 53–74.

Horedt 1973 – K. Horedt, Die dakischen Silberfunde. *Dacia* N. S. 17 1973, 127–167.

Hamilton, Falconer 1903 – H. C. Hamilton, W. Falconer, *The Geography of Strabo*. Literally translated, with notes, in three volumes. London 1903.

Janković 2014 – M. A. Janković, Negotiating identities at the edge of the Roman Empire, in: *Fingerprinting the Iron Age. Approaches to identity in the European Iron Age. Integrating South–Eastern Europe into the debate*, (eds.) C. N. Popa, S. Stoddart, Oxford 2014, 89–96.

Jevtić 2007 – M. Jevtić, *Art of Scordisci and Židovar treasure*. Beograd – Vršac 2007.

Jevtić et al. 2006 – M. Jevtić, M. Lazić, M. Sladić, *The Židovar treasure. Silver jewellery hoard from the settlement of Scordisci*. Vršac – Beograd 2006.

Jovanović 2000 – A. Jovanović, Romanization and ethnic elements in burial practice in the southern part of Pannonia Inferior and Moesia Superior, in: *Burial, society and context in Roman world*, (eds.) J. Pearce, M. Millet, M. Struck, Oxford 2000, 204–214.

Lapatin 2014 – K. Lapatin, *The Berthouville Silver Treasure and Roman Luxury.* Los Angeles 2014.

Ljuština 2014 – M. Ljuština, La Tène settlement Židovar near Vršac, Serbia, in: *The Clash of Cultures? The Celts and the Macedonian world*, (eds.) M. Guštin, W. David, Manching, 217–224.

Lupu 1981 – N. Lupu, Două morminte dacice descoperite la Tilișca (jud. Sibiu). *Thraco-Dacica* 2, 1981, 197–207.

Mano-Zisi 1957 – D. Mano-Zisi, *Nalaz iz Tekije*. Beograd 1957.

Matei-Popescu 2010 – F. Matei-Popescu, *The Roman army in Moesia Inferior*. București 2010.

Matei-Popescu 2017 – F. Matei-Popescu, The Dacians from Moesia Inferior, in: *Migration, Kolonisierung, Akkulturation im Balkanraum und im Osten der Mittelmeerraumes (3. Jh. v. Chr. – 6. Jh. n. Chr.)*, (ed.) V. Mihailescu-Bîrliba, Konstanz 2017, 139–159.

Mărghitan 1976 – L. Mărgitan, *Tezaure de argint dacice. Catalog*. București 1976.

Medeleț 1977 – F. Medeleț, Tipologia brățărilor spiralice dacice din argint. *Studii și comunicări Caransebeș* 2, 1977, 277–297.

Medeleț 1993 – F. Medeleţ, *Au sujet d'une grande spirale dacique en argent du Musée National de Belgrade*. Caietele Banatica. Reşiţa 1993.

Medeleț 1994 – F. Medeleţ, În legătură cu o mare spirală dacică de argint aflată în muzeul Naţional din Belgrad. Addenda: unele precizări cu privire la observaţiile asupra tezaurelor de argint din Latène-ul târziu. *Analele Banatului* 3, 1994, 192–230.

Mihajlović, Janković – V. D. Mihajlović, M. A. Janković, Neither „Celtic" nor „Dacian": the site of Židovar at the edges of La Tène, Carpathian and Roman worlds. *Etnoantropološki problemi* 16.3, 2021, 795–833.

Mitrea 1972 – I. Mitrea, Un nou tezaur de tetradrahme thasiene și podoabe dacice de argint descoperit în Moldova. *Studii și cercetări de istorie veche* 23.4, 1972, 641–646.

Mócsy 1974 – A. Mócsy, *Pannonia and Upper Moesia. A history of the Middle Danube provinces of the Roman Empire*. London–Boston 1974.

Noll 1980 – R. Noll, *Das Inventar des Dolichenus-heiligtums von Mauer an der Url (Noricum)*. Wien 1980.

Painter 2001 – K. S. Painter, *The Insula of the Menander at Pompei, Vol. IV: The Silver Treasure*. Oxford 2001.

Pârvan 1926 – V. Pârvan, *Getica. O protoistorie a Daciei*. București 1926.

Petolescu 2001 – C. C. Petolescu, Dacia în timpul regelui Decebal, in: *Istoria Românilor* 1, (eds.) M. Petrescu-Dâmbovița, A. Vulpe, București 2001, 672–720.

Piso 2015 – I. Piso, Ein Gebet für die Nymphen aus Germisara. *Acta Musei Napocensis* 52.1, 2015, 47–68.

Piso, Rusu 1990 – I. Piso, A. Rusu, Nymphaeumul de la Germisara. *Revista Monumentelor Istorice* 59.1, 1990, 9–17.

Popescu 1937–1940a – D. Popescu, Objets de parure géto-daces en argent. *Dacia* 7–8, 1937–1940, 183–202.

Popescu 1937–1940b – D. Popescu, Le trésor dace de Poiana–Gorj. *Dacia* 7–8, 1937–1940, 203–215.

Popescu 1945–1947 – D. Popescu, Nouveaux trésors géto-daces en argent. *Dacia* 11–12 1945–1947, 35–69.

Popescu 1958 – D. Popescu, Le trésor dace de Sîncrăeni. *Dacia* N. S. 2 1958, 157–206.

Popović 1994a – I. Popović, Autochtonous and Hellenistic traditions in Roman jewelry from the first to the third Century, in *Antique Silver from Serbia*, (ed.). I. Popović, Beograd 1994, 89–94.

Поповић 1994b – И. Поповић, Налаз сребрног накита из околине Кладова, *Зборник Народнoг музеја* 15.1, 1994, 63–70 (I. Popović, Nalaz srebrnog nakita iz okoline Kladova, *Zbornik Narodnog muzeja* 15.1, 1994, 63–70).

Popović 1997 – I. Popović, Miscellanea argentea, *Starinar* 48, 1997, 73–90.

Popović 2004 – I. Popović, Bijoux romains dans les Balkans: traditions locales et influence de la romanisation. *Balcanica* 34, 2004, 39–62.

Popović 2010a – I. Popović, Characteristic of Balkan-Danubian Treasures from the End of the 1st to the Middle of the 3rd Century, in *Gold and Silver Toreutics in the Classical and "Barbarian" Worlds, Ancient and Medieval Metalworks. Archaeology–Numismatics–Nuclear Analyses = Studii și cercetări de istorie veche și arheologie* 59–60 (2008–2009), 2010, 33–51.

Popović 2010b – I. Popović, Gold and silver jewelry from Central Balkan provinces of Roman Empire. *Histria Antiqua* 19, 2010, 55–64.

Popović, Borić-Brešković 1994 – I. Popović, B. Borić-Brešković, *The Bare hoard*. Beograd 1994.

Popović P. 1989–1990 – P. Popović, Mladjegvozdeno doba Djerdapa. *Starinar* 40–41, 1989–1990, 165–176.

Rašajski 1961 – R. Rašajski, Dačka srebrna ostava iz Kovina. *Rad Vojvođanskih Muzeja* 10, 1961, 7–24.

Rădulescu 2001 – A. Rădulescu, Politica romană la Dunărea de Jos, in: *Istoria Românilor* 1, (eds.) M. Petrescu-Dâmbovița, A. Vulpe, București 2001, 655–667.

Riha 1979 – E. Riha, *Die römischen Fibeln aus Augst und Kaiseraugst*. Augst 1979.

Ruseva-Slokoska 1991 – L. Ruseva-Slokoska, *Roman Jewellery. A collection of the National Archaeological Museum – Sofia*. London 1991.

Rustoiu 1987–1988 – A. Rustoiu, Colanele de argint dacogetice. *Acta Musei Napocensis* 24–25 1987–1988, 135–145.

Rustoiu 1996 – A. Rustoiu, *Metalurgia bronzului la daci (sec. II î. Chr. – sec. I d. Chr.). Tehnici, ateliere şi produse de bronz*. Bucureşti 1996.

Rustoiu 1997 – A. Rustoiu, *Fibulele din Dacia preromană*. Bucureşti 1997.

Rustoiu 2002 – A. Rustoiu, Die östliche Gruppe des dakischen Schmucks. Eine Untersuchung bezüglich der interregionalen Beziehungen im vorrömischen Dakien im 1. Jh. v. Chr. – 1. Jh. n. Chr., in: *Interregionale und kulturelle Beziehungen im Karpatenraum (2. Jahrtausend v. Chr. – 1. Jahrtausend n. Chr.)*, (eds.) A. Rustoiu, A. Ursuțiu, Cluj–Napoca 2002, 191–226.

Rustoiu 2005 – A. Rustoiu, Die dakischen befestigten Siedlungen im Gebiet der Eisernen Tore der Donau (2. Jh. v. Chr. – 1. Jh. n. Chr.), in: *Limes Dacicus Occidentalis. Die Befestigungen im westen Dakiens vor und nach der römischen Eroberung*, E. Nemeth, A. Rustoiu, H. Pop, (Cluj–Napoca 2005, 60–77.

Rustoiu 2019 – A. Rustoiu, *Archaeological explorations of magic and witchcraft in Iron Age Transylvania*. Cluj–Napoca 2019.

Rustoiu 2020 – Commentaria archaeologica et historica (III). Chronology of the Dacian silver hoards. *Ephemeris Napocensis* 30, 2020, 11–38.

Rustoiu et al. 2017 – A. Rustoiu, I. V. Ferencz, A. Drăgan, Dacian fortified settlements in the Iron Gates region during Late Iron Age (2nd century BC – 1st century AD), in: *Iron Age fortifications on the Tisa–Dniester space*. Proceedings of Saharna Summer Colloquium July 14th-17th, 2016, (eds.) A. Zanoci, V. Sîrbu, M. Băț, Chișinău-Brăila 2017, 187–208.

Rustoiu, Berecki 2014 – A. Rustoiu, S. Berecki, Celtic elites and craftsmen. Mobility and technological transfer during the late Iron Age in the eastern and south-eastern Carpathian Basin, in: *Iron Age Crafts and Craftsmen in the Carpathian Basin*. Proceedings of the International Colloquium from Târgu Mureş, 11–13 October 2013, (ed.) S. Berecki, Târgu Mureş 2014, 249–278.

Šašel Kos 2011 – M. Šašel Kos, The Roman conquest of Dalmatia and Pannonia under Augustus – some of the latest research results, in: *Fines imperii – imperium sine fine? Römische Okkupations- und Grenzpolitik im frühen Principat*. Beiträge zum Kongress “Fines imperii – imperium sine fine?” in Osnabrück vom 14. Zum 18. September 2009, (eds.) M. Moosbauer, R. Wiegels, Rahden/Westf. 2011, 107–117.

Spânu 2001–2002 – D. Spânu, Un mormânt de epocă târzie La Tène de la Dubova. *Studii și cercetări de istorie veche și arheologie* 52–53 2001–2002, 83–132.

Spânu 2002 – D. Spânu, Studien zum Silberschatzfund des 1. Jahrhunderts v.Chr. von Lupu, Rumänien. *PZ* 77 2002, 84–136.

Spânu 2012 – D. Spânu, *Tezaurele dacice. Creaţia în metale preţioase din Dacia preromană*. Bucureşti 2012.

Spânu 2019a – D. Spânu, Core issues of Late La Tène periodization in Romania. *Peuce* 17 2019, 167–206.

Spânu 2019b – D. Spânu, Fibulae with Canid Protome (Tierkopffibeln) in Romania. *Plural* 7.2 2019, 111–128.

Stalio 1986 – B. Stalio, Le site prehitorique Ajmana à Mala Vrbica. *Cahiers des Portes de Fer* 3, 1986, 27–50.

Stângă 1992 – I. Stângă, Découvertes archéologiques inédites appartenant à l’époque Latène dans le dép. de Mehedinți. *Symposia Thracologica* 9, 1992, 151–154.

Téglas 1911 – G. Téglas, A Krisztus születése előtti Dáczia ezüstötvösségének bányatörténelmi jelentősége. *Bányászati és kohászati lapok* 44.9, 1911, 521–551, 601–607.

Treister 2016 – M. Treister, On the find of a phalera made from the medallion of a silver cup in barrow no. 20 of the Noin-Ula burial-ground (Northern Mongolia). *Ancient Civilizations from Skythia to Siberia* 22, 2016, 55–95.

Vulpe 1976 – R. Vulpe, *Studia Thracologica*. București 1976.

Zirra, Spânu 1992 – V. V. Zirra, D. Spânu, Observaţii asupra tezaurelor de argint din La Tène-ul târziu. *Studii și cercetări de istorie veche și arheologie* 43.4, 1992, 401–423.

Резиме: АУРЕЛ РУСТОЈУ, Румунска академија, Институт за археологију и историју уметности, Клуж–Напока

„ДАЧКЕ” ОСТАВЕ СРЕБРА ИЗ ГОРЊЕ МЕЗИЈЕ. ПРЕКОДУНАВСКЕ КУЛТУРНЕ ВЕЗЕ У ОБЛАСТИ ЂЕРДАПА ОД АВГУСТА ДО ТРАЈАНА

Кључне речи. – оставе сребра, Мезија, Дакија, хоризонт остава Текија–Баре, област Ђердапа, Касно гвоздено доба

Током друге половине 1. века н. е., у Горњој Мезији, у области Ђердапа, а однедавно и у пределу доњег тока Саве, појављује се низ остава које садрже накит израђен од сребра. Већина истраживача сматра да своје типолошке претходнике имају у прerимској Дакији. М. Гуштин и И. Поповић су недавно овој групи налаза дали назив „хоризонт остава Текија–Баре”. Циљ овог прилога је расправа везана за неке аспекте депоновања ових остава: њихово „дачко” порекло, њихов значај, као и појава овог феномена у периоду када се у областима северно од Дунава, генерацију или две раније, престало са депоновањем сетова сребрног накита, које је до тада представљало честу појаву.

Група остава Текија–Баре води порекло од остава сребрног накита депонованих на територији северно од Дунава. То се огледа у типологији неких делова накита израђених од сребра и обичај закопавања ових предмета заједно са комадима сребрног новца и металног или керамичког посуђа. Појава оваквих остава јужно од Дунава током друге половине 1. века н. е. представљала је резултат оживљавања неких ритуалних радњи пореклом са територије северно од Дунава. Оживљавање овог обичаја се може приписати „Гетима”, које је почетком 1. века н. е. Елијус Катус преселио у област јужно од реке, а који су, по Страбону (VII.3.10), касније били познати под именом Мези. Премештање великог броја људи, укључујући читаве заједнице, за исход је имало преношење бројних ритуалних радњи и веровања из једне области у другу. Међутим, они су се изменили и прилагодили у складу са новим друштвеним околностима римске Мезије. Због тога се може рећи да структура и састав остава типа Текија–Баре указују на низ радњи које воде порекло са територије Дачког краљевства, а које су сачуване и оживљене јужно од Дунава, у периоду у којем су оне северно од Дунава већ једну или две генерације раније биле напуштене.

UDC: 904:738.6"652"(497.11)
https://doi.org/10.2298/STA2272133J
Original research article

LJUBOMIR JEVTOVIĆ, Institute of Archaeology, Belgrade

PRODUCTION OF CERAMIC BUILDING MATERIAL IN ANCIENT VIMINACIUM

e-mail: jevtoviclj@gmail.com

Abstract. – The technology of brickmaking was introduced to the area of Viminacium by the Romans. The development and growth of the urban settlement in the 1st–4th century necessitated the need for huge quantities of construction materials. Large-scale production of ceramic building materials, which are often abbreviated to CBM, is attested both by the numerous finds of the material itself, as well as traces of the manufacturing process. More than 15 kilns and several structures used in the process were discovered in the vicinity of Viminacium. Still, the subject of Viminacium CBM production has only been modestly studied. Thus, the aim of this paper is to analyse this production, namely the characteristics and organisation of its processes, based on the results of archaeological excavations and previously published research. To achieve this goal, we focused on the layout of the particular manufacturing sites, and the production process organisation, together with the necessary review of the characteristics of the found kilns and other structures used in the production process.

Key words. – Roman CBM production, Viminacium, brick kilns, Pećine, Provalije, Livade nad Ćuprijom, Pirivoj, Kostolac

CBM was unknown to the region of the Middle Danube prior to the arrival of the Romans. In the centuries following the conquest of Illyricum, Viminacium[1] grew to be one of its larger urban settlements (Fig. 01). In the earliest phases of its development, locally available construction materials were preferred,[2] but from the late 1st – early 2nd century onwards came the widespread usage of CBM. This is attested by the immense quantities of the material, as well as by numerous structures and traces of the production process. Disregarding the smaller finds, more than 15 quadrangular kilns[3] and several production structures and features have been unearthed thus far.

In spite of numerous finds, the CBM industries of Viminacium have not been studied from the perspective of all elements of the production process whose traces were recognised at the researched sites. Most kilns came to light during the rescue archaeological excavations, and were published in the form of reports,[4] while a few attempts were made at analysing its products, considering their epigraphic,[5] morphological and physical characteristics and later use in buildings[6]. In this paper, we focus on the layout of the manufacturing areas, as well as on the CBM manufacturing process

[1] Regarding the history and development of Viminacium *cf.* Поповић 1968; Mirković 1986, 21–59.

[2] For the construction materials and techniques applied in the territory of Viminacium, *cf.* Nikolić 2013.

[3] The number of quadrangular kilns could be even higher, as Č. Jordović mentions that in the period between 1977 and 1992 a total of 11 brick kilns were excavated on the territory of Viminacium (Јордовић 1994, 96). Three of these could not be verified, as they were not published and we could not find them in the field documentation. Additionally, one recently discovered quadrangular kiln from the site Provalije TEKO – A could not be included in this analysis, as due to its smaller size and the lack of finds, it cannot be associated to CBM production with any degree of certainty.

[4] Jurišić 1956; Јордовић 1994; Raičković, Redžić 2005; Jovičić, Milovanović 2017; *cf.* Jevtović, Danković 2022.

[5] Benea 1983; Jevtović 2013.

[6] Nikolić 2013; Radivojević 2018.

Manuscript received 27th February 2022, accepted 27th October 2022



Fig. 1. Plan of Viminacium with the position of kilns (after Jevtović, Danković 2022, 117, Fig. 1)

Сл. 1. План Виминацијума са позицијом пећи (према Jevtović, Danković 2022, 117, Fig. 1)

and organisational aspects of the production. To this end, we will examine the structures, features and finds associated with the manufacture.[7] The structures and features used in the manufacture of ceramic objects other than CBM (i.e., pottery, lamps, etc.) will not be discussed in detail, although they have to be taken into account since workshops often manufactured various ceramic products.

MANUFACTURING AREAS AND KILNS

Production of CBM and other ceramic finds in Viminacium was located in the same zones, spreading over four manufacturing areas with units, or workshops, located nearby to the east and south of Viminacium city and camp,[8] at the sites of Pirivoj, Pećine and Livade kod Ćuprije in the area of Kostolac village, but also further to the west, at the site of Provalije – TEKO A, situated in the zone of Kostolac town (Fig. 1).

1. Pirivoj

The Pirivoj site is located c. 425 m to the east of the military camp. A single kiln was discovered on the site, on the edge of the eastern necropolis of Viminacium, which was used between the 2nd century and late Antiquity.[9]

Unit 1 (Kiln No. 1)

The kiln (Fig. 2) [10] is positioned some 12 m to the south of the nearest graves, just a few metres from the main road that led from the eastern gate of the camp towards *Pincum* (today Veliko Gradište).[11] The immediate surroundings of the kiln were not investigated, but a geophysical survey of the area to the west of the kiln identified several anomalies that could be interpreted as remains of other kilns.[12] The kiln is quadrangular in plan (4.30 x 2.90 m) with one main corridor and six side flues on the same level as the bottom of the main corridor (Fig. 3/1). The kiln operated sometime between the fourth decade of the 3rd century and the third decade of the 4th century. It was emptied after its destruction, while its insides were filled with rubble from its collapsed structure.[13]

---

[7] In order to simplify the analysis a new numeration of the kilns from Viminacium will be used. For their detailed description and technical characteristics, as well as for that of other structures and features used in the manufacturing process, one should consult the given literature.

[8] Jevtović, Danković 2022.

[9] *Cf.* Danković et al. 2018 with given literature.

[10] Jovičić, Milovanović 2017.

[11] *Cf.* Danković 2015.

[12] *Cf.* Jovičić, Milovanović 2017, 31, fig. 12.

[13] Ibid, 32.



Fig. 2. Kiln No. 1 (Unit 1)
(after: Jovičić, Milovanović 2017, 23, Fig. 4)

Сл. 2. Пећ бр. 1 (Радионица 1)
(ӣрема: Jovičić, Milovanović 2017, 23, Fig. 4)

2. Pećine

The site of Pećine is located c. 420 m south of the civil settlement of Viminacium, in the area of the modern-day Kostolac B thermal power plant. It was home to at least four workshops, spread over an area of c. 16,000 m² (Fig. 4). The areas surrounding and between the manufacture units were occupied by the necropolises,[14] which were formed prior to the production complex, during the middle of the 1st century AD and lasted until the middle of the 5th century AD. After the abandonment of production, the workshops were also used as burial grounds.

Unit 2 (Kiln Nos. 2–4)

The workshop named by the researchers the Craftsmen Centre[15] is situated c. 425 m south of the civilian settlement. The workshop comprised three quadrangular kilns, three circular and one small quadrangular kiln, a drying hall(s), a clay pit, a well and remains of several other structures (Fig. 5).

The three quadrangular kilns formed a single structure ("brick-plant"), around a common working space (c. 45 m²) (Figs. 3/2–4, 6). The structure was completely dug in and separated from the surrounding ground by a perimeter wall. Two kilns were next to each other and the third was positioned perpendicularly. These are quadrangular kilns with a single corridor and cross flues at a higher level than the main corridor. It is likely that all three kilns had 6 side flues, but the front part of Kiln No. 3 was damaged, so only 5 were preserved. The kilns were of similar size, with Kiln No. 4 being the largest (5.05 x 4.00 m), Kiln No. 2 slightly smaller (4.85 x 3.90 m) and the damaged Kiln No. 3 preserved to a lesser extent (3.80* x 4.00 m). The upper chambers of the kilns were filled with large amounts of fragmented bricks, *tegulae* and *imbrices,* which could represent the displaced remains of their load. Several fragmented tiles bore LEGVIICL stamps, while a few were stamped with a LEGVIICLANT stamp. Among this rubble, in Kiln Nos. 3 and 4 were various broken but seemingly complete pottery vessels and a terracotta.[16]

To the south and west of the kilns were the remains of eight bases (Fig. 6), made from a combination of bricks and stones with lime mortar.[17] The bases are similar in dimensions, between 0.70 x 0.70 x 0.30 m and 1.00 x 0.90 x 0.25 m. They are spread over an area 32.23 m long and c. 23.80 m wide, unevenly distributed into four unequally long, but parallel rows, c. 7.20–7.50 m apart. The bases in each single row are between 3.90 and 5.45 m apart, and their layout suggests the existence of more bases. They might have been the foundation of a single, or perhaps several porch-like structures (i.e., drying halls), as suggested by their uneven disposition and the position in regard to the quadrangular kilns. The bases carried a wooden construction with a roof made out of *tegulae* and *imbrices*, as indicated by the intensive rubble that covered the area. A well, three smaller circular/oval, and a single small quadrangular kiln were discovered between the bases (Fig. 5). The finds discovered within these kilns testify that they were used for pottery, lamp and terracotta production.[18] To the northwest of the structure, a clay pit was partially excavated (Fig. 5).[19] Its excavated part was c. 9 m long and 5 m wide, with a depth reaching c. 2.4 m. The pit infill contained several concentrations of clay lumps[20] and numerous finds. Six smaller waste pits were discovered on the territory of the Craftsmen Centre, filled with broken pottery and terracotta. The remains of two walls and a covered corridor were

---

[14] Зотовић, Јордовић 1990, 2; Vojvoda, Mrđić 2017, 9.

[15] Јордовић 1994; Raičković 2007.

[16] Ibid.

[17] Јордовић 1994, 101–102.

[18] Ibid, 97–98; Raičković 2007, 14.

[19] Raičković et al. 2006, 69; Documentation of the Institute of Archaeology, Belgrade, unpublished.

[20] Documentation of the Institute of Archaeology, Belgrade, unpublished.

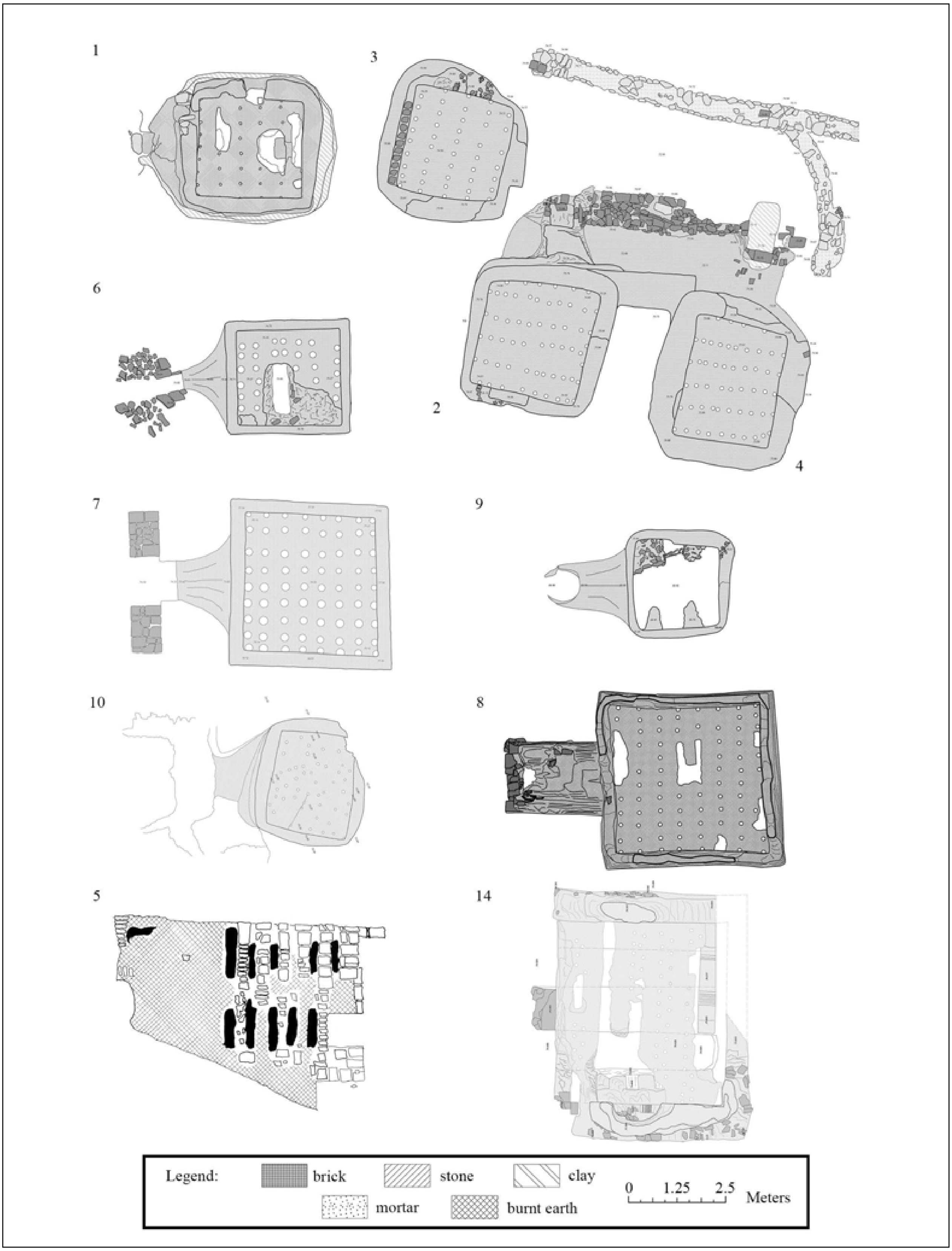


Fig. 3. Kilns of Viminacium (after: Jevtović, Danković 2022, 119, Fig. 2)

Сл. 3. Основе пећи са Виминацијума (према: Jevtović, Danković 2022, 119, Fig. 2)

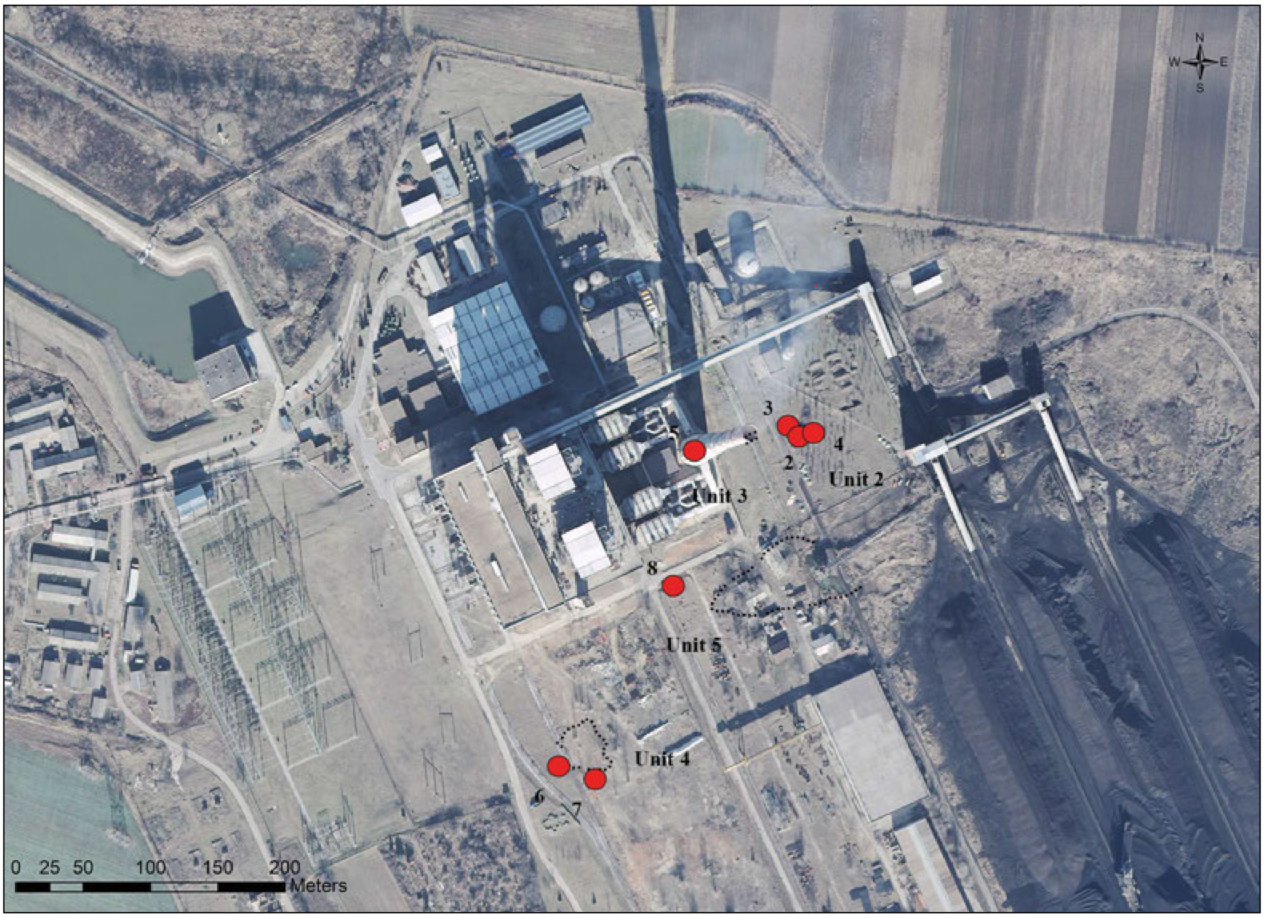


Fig. 4. Site of Pećine

Сл. 4. Локација Пећине

also discovered on the site, but their position and relationship to the other structures remains unclear.

The pottery analysis,[21] several coins of Emperor Antonius Pius as well as CBM bearing LEGVIICLANT[22] stamps suggests that the CBM production of the Craftsmen Centre occurred during the time of the Severan dynasty. All mentioned structures and features could be a part of the same workshop, as was suggested by the authors,[23] but their layout and differences in the construction technique indicate that at least some of them belonged to different/later phases of its use.

Unit 3 (Kiln No. 5)

The third manufacture unit was excavated c. 50 m to the west of the Craftsmen Centre. It was comprised of a single complex kiln (No. 5),[24] with two main corridors and 9 cross flues (Fig. 3/5, 7). It was larger in dimensions (7.30* x 3.80 m) but was heavily damaged, preserved only to the level of the grill. Its combustion chamber was filled with earth, fragmented CBM and four *tegulae* bearing LEGVIICL stamps. Amongst the rubble, a single coin was discovered, belonging to the mint of the emperor Caracalla. The surroundings of the kiln were devastated prior to the excavation, but in its vicinity, three circular kilns around a common stoke pit were identified.[25] The pit had a rectangular shape (2.40 x 1.45 x 2.00 m) and was filled with pottery shards and tile fragments, which suggest that it also served as a waste pit. The precise position and the relationship of all the mentioned features and structures remains uncertain.

[21] Raičković 2007, 74.

[22] Јордовић 1994, 101; Mirković 1977; Kurzmann 2005, 328–329; Warry 2006, 58.

[23] Jordović 1994, 105; Raičković 2007, 50.

[24] Raičković, Redžić 2005, 85–86.

[25] Ibid, 82–84; Raičković 2007, 13, 18.

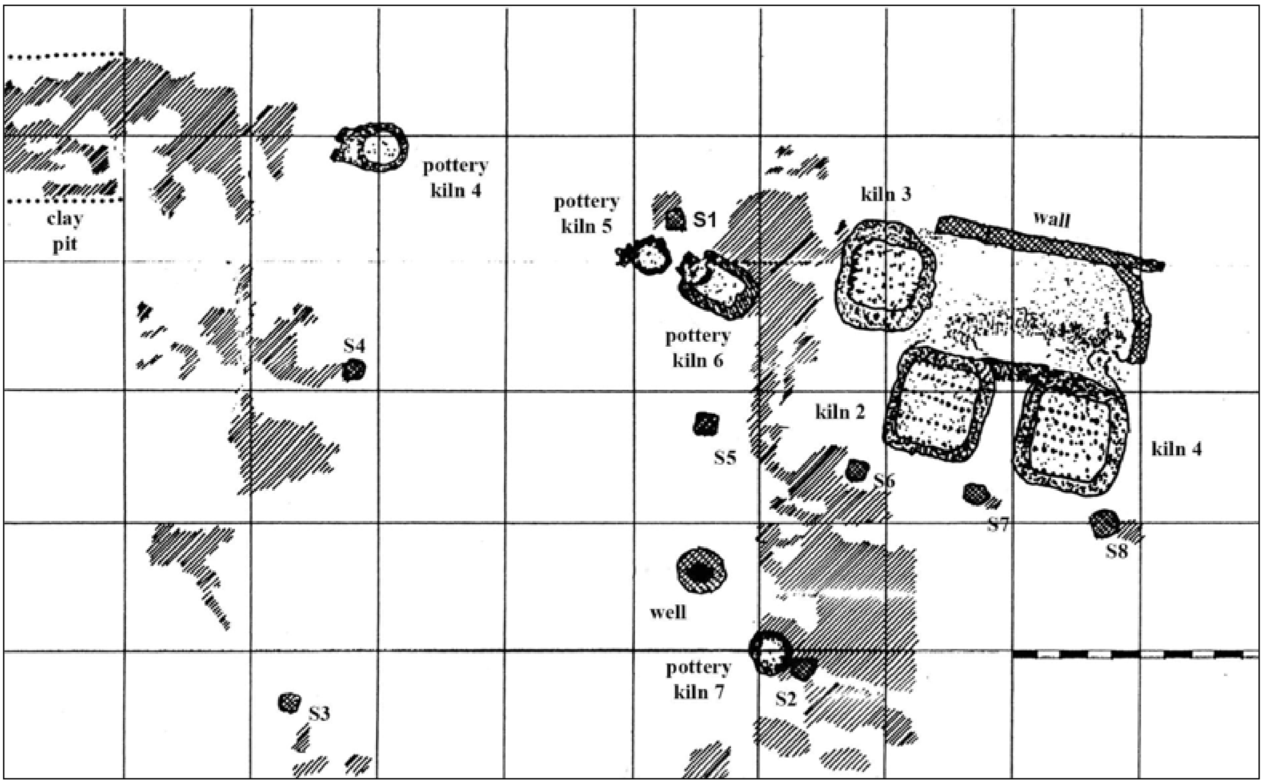


Fig. 5. Unit 2 – "Craftsmen Centre" (Documentation of the Institute of Archaeology, Belgrade)

Сл. 5. Радионица 2 – „Занатски центар" (Док. Археолошког института, Београд)

Based on the mentioned finds, Kiln No. 5 was operational sometime after the reign of Emperor Hadrian,[26] most likely in the latter half of the 2nd century, and was abandoned prior to the early 3rd century.

Unit 4 (Kiln Nos. 6 and 7)

The unit is located in the southern part of the Pećine site, some 315 m southwest of the Craftsmen Centre. It was comprised of two kilns (No. 6[27] and 7[28]) 18 m apart, placed on the edges of a large borrow pit.[29] Both kilns are simple quadrangular kilns with a single main corridor and four cross flues positioned higher than the bottom of the main corridor (Fig. 3/6–7). Kiln No. 6 (Fig. 8) is smaller (4.30 x 2.95 m) and Kiln No. 7 (Fig. 9) is larger (5.50 x 4.00 m). The collapse of the grill of Kiln No. 6 caused its load of *imbrices* to fall into the combustion chamber. Additionally, piles of wasters were discovered on both sides of its *praefurnium*. Among these, two fragments were marked with a LEGVIICL stamp.[30] Kiln No. 7 had no traces of damage and was emptied after its destruction. A single stamped brick was discovered in front of the kiln, on the edge of the clay pit. The researchers originally identified the stamp as LEGVIICLPF,[31] but a re-examination determined that it reads LEGVIICLPS, which dates it to the late 3rd – early 4th century.[32]

The borrow pit had an irregular shape, c. 40 x 32 m in dimensions (c. 1,280 m²) and was more than 4 m deep at certain points (Fig. 10). Several piles of clay lumps and stacks of finished CBM were discovered on its bottom (Fig. 11). Its edge in front of Kiln No. 7 was covered with waste from the firing of the kiln (mainly ash). After the abandonment of the workshop, the pit was filled with 2nd–4th century material, originating

[26] *Cf.* Jevtović 2013, 41–43.

[27] Raičković, Redžić 2005, 85, 91, 93, P. I, III.

[28] Ibid, 84, 91, 96, 106, Sl. 2, 4; P. I, VI; Redžić et al. 2018a, 87–88.

[29] Redžić et al. 2018a, 87–88.

[30] Documentation of the Institute of Archaeology, Belgrade, unpublished.

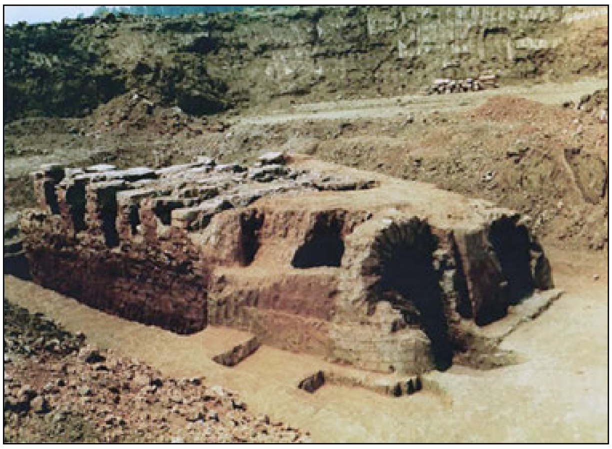
[31] Redžić et al. 2018a, 88.

[32] Jevtović 2013, 46; *cf.* Dušanić 1978.



Fig. 6. Kiln Nos. 2–4 (Unit 2) (after Nikolić 2013, 28, Fig. 12)

Сл. 6. Пећи бр. 2–4 (Радионица 2) (ūрема: Nikolić 2013, 28, Fig. 12)



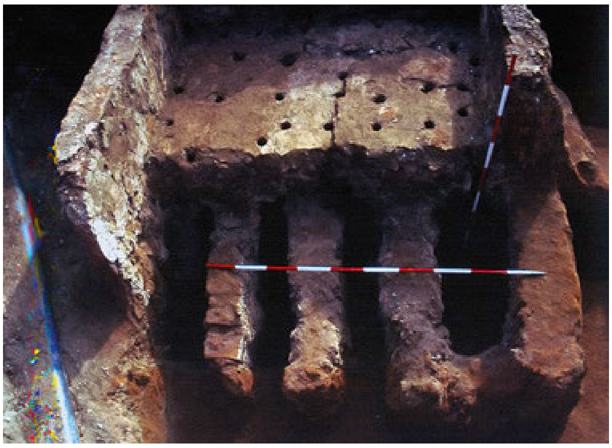


Fig. 7. Kiln No. 5 (Unit 3) (after: Mirković 2007, 79, Abb. 72)
Fig. 8. Kiln No. 6 (Unit 4) (Documentation of the Institute of Archaeology, Belgrade)

Сл. 7. Пећ бр. 5 (Радионица 3) (ūрема: Mirković 2007, 79, Abb. 72)
Сл. 8. Пећ бр. 6 (Радионица 4) (Док. Археолошкоī инсшишуша, Беоīрад)





Fig. 9. Kiln No. 7 (Unit 4) (after: Raičković, Redžić 2005, 106, Sl. 4)
Fig. 10. Unit 4, The edge of the clay pit in front of Kiln No. 7 (Documentation of the Institute of Archaeology, Belgrade)

Сл. 9. Пећ бр. 7 (Радионица 4) (ӣрема: Raičković, Redžić 2005, 106, Сл. 4)
Сл. 10. Радионица 4, Обод јаме-īлиниишта исӣред ӣећи бр. 7 (Док. Археолошкоī инсӣиӣуӣа, Беоīрад)

from the cleaning of the necropolis. Some c. 10 m to the south of the kilns and the pit lie the remains of a large, solid wall building, traces of some wooden structures and a well.[33] The precise function and the chronology of these structures cannot be determined, so at the moment they cannot be linked to the CBM production.

The workshop operated sometime in the period between the reign of Emperor Hadrian and the middle of the 3rd century. This dating is based on the two mentioned fragmented bricks with a LEGVIICL stamp,[34] which can be unequivocally associated with the output of Kiln No. 6.[35]

Unit 5 (Kiln No. 8)

The unit is located in the central area of the Pećine site, some 70 m southwest of the Craftsmen Centre. It was comprised of a kiln and a clay pit.[36] Kiln No. 8 is a simple quadrangular kiln with a single corridor and six cross flues positioned higher than the level of the central corridor (Figs. 3/8, 12). It is large (6.76 x 4.60 m) and preserved to a great extent, with the oven walls preserved to a maximum height of 1.25 m. Due to the damage to the oven floor, its lower parts were filled

[33] Documentation of the Institute of Archaeology, Belgrade, unpublished.

[34] *Cf.* Jevtović 2013, 41–43.

[35] It is our opinion that the third stamped brick, the one discovered in the pit in front of Kiln No. 7, has to be excluded from the chronological analysis. This is mainly due to its ambiguity and its arguable attribution to the kiln (the pit was backfilled with various materials after the abandonment of the workshop).

[36] Redžić et al. 2018b; Redžić et al. *in prep.*







Fig. 11. Stacks of CBM in the clay pit of Unit 4 (after: Jevtović, Danković 2022, 121, Fig. 4)
Fig. 12. Kiln No. 8 (Unit 5) (Documentation of the Institute of Archaeology, Belgrade)
Fig. 13. Clay pit of Unit 5 (Documentation of the Institute of Archaeology, Belgrade)

Сл. 11. Наслагане опеке у јами-глиништу радионице 4 (према: Jevtović, Danković 2022, 121, Fig. 4)
Сл. 12. Пећ бр. 8 (Радионица 5) (Док. Археолошког института, Београд)
Сл. 13. Јама-глиниште радионице 5 (Док. Археолошког института, Београд)

with lumps of burnt earth mixed with soil, parts of the kiln's construction, fragmented pottery, animal and human bones, whole and fragmented CBM, a single coin of Emperor Hadrian and a hinged strap of a *lorica segmentata* of the Corbridge type. Amongst the CBM from the filling and the construction of the kiln, a total of 168 pieces bear LEGVIICL stamps of different types.[37]

The pit is located c. 20 m to the south of the kiln. It had an irregular shape (105* x 58* m) and its edges were only partially defined (Fig. 13). It was c. 3 m deep. The material from its infill indicates that it was filled sometime after the second half of the 2nd century, most likely in the 3rd and/or 4th century.[38]

The stamped CBM, other mentioned finds and the filling of the pit indicate that the Unit 5 functioned in the middle – second half of the 2nd century.[39]

3. Livade kod Ćuprije

The site is located some c. 200–250 m west of the larger production centre on the site of Pećine. A 4th century *villa rustica* was discovered on the site,[40] but data pertaining to the site is scarce, as the results were only partially published.

Unit 6 (Kiln Nos. 9 and 10)

Fragmentary information is available on the two kilns (No. 9 and 10) discovered on the site. Their precise location and relationship, both mutual and with

---

[37] Ibid.
[38] Ibid.
[39] Ibid.
[40] Jovičić, Redžić 2012.

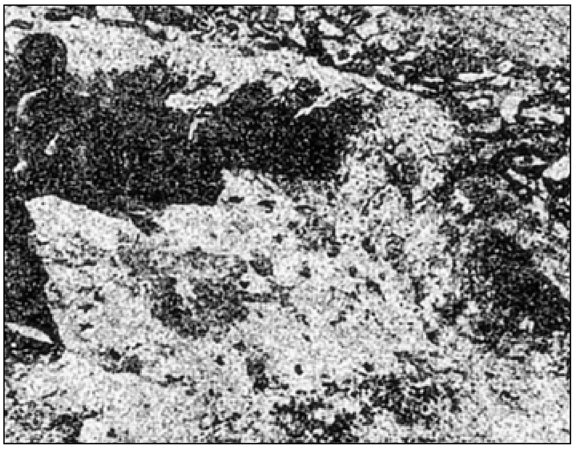



Fig. 14. One of the kilns No. 11–13 (after: Ненадовић, Јуришић 1956, 129, Sl. 11)
Fig. 15. Kiln Nos. 14 and 15 (after: Jevtović, Danković 2022, 122, Fig. 5)

Сл. 14. Једна од йећи бр. 11–13 (йрема: Ненадовић, Јуришић 1956, 129, Сл. 11)
Сл. 15. Пећи бр. 14 и 15 (йрема: Jevtović, Danković 2022, 122, Fig. 5)

the other structures, are unknown, except for the fact that they were not in the immediate vicinity of one another. Both kilns are common kilns with a central corridor (Fig. 3/9–10).

Kiln No. 9 was larger (4.80 x 2.75 m) and had three side flues. The only available data regarding Kiln No. 10 had to be extracted from its plan. It was only partially preserved (3.85* x 3.25 m). No details are known about the finds discovered in the kilns. Regarding their relationship with the 4th century villa and other structures on the site, they are dated in the 2nd–3rd century.[41] A well, several dumping pits and at least five circular kilns were also excavated on the site.[42] It seems that only one of these round kilns predates the villa and should be dated in the 2nd or 3rd century,[43] while the rest seem to date to the medieval period. Their precise position and details regarding other features are unknown, but one feature stands out. According to the authors,[44] one circular pit originally served as a well, or for the storage of clay, while in the later phases of the production, or after its abandonment, it served as a dumping pit.

4. Provalije – TEKO A

The site of Provalije is located some 3.30 km west of the civilian settlement, on the opposite bank of the Mlava river, in the territory of the modern-day Kostolac A thermal power plant. Nine brick and pottery kilns were discovered and subsequently destroyed in 1942 – 1944, during the construction of the power plant.[45] Unfortunately, no further data is available on these structures. Since then, six kilns[46] have been identified and partially explored on the site.

Unit 7 (Kiln Nos. 11–13)

Most details regarding Kiln Nos. 11–13 are unknown,[47] including their precise position and ground plan (Fig. 14). The kilns were 28 and 11 m apart and perhaps formed a single battery with a common working space (c. 154 m²). All three were simple quadrangular kilns with a single corridor and a completely dug in lower chamber. Two (Nos. 11–12) were of smaller size (3.10 x 3.50 m; 2.60 x 2.70 m), while the third (No. 13) was mostly destroyed. One of the kilns had the upper chamber filled with fragmented CBM, while the other two were emptied prior to their abandonment.[48]

41 Ibid, 372.

42 Ibid; Raičković, Redžić 2005, 82; Documentation of the Institute of Archaeology, Belgrade, unpublished.

43 Jovičić, Redžić 2012, 372; Documentation of the Institute of Archaeology, Belgrade, unpublished.

44 Raičković, Redžić 2005, 87.

45 Orlov 1960, 314.

46 Remains of another quadrangular kiln were discovered in 2019, but at the moment it cannot be associated with CBM production.

47 Јуришић 1956, 129–130.

48 Ibid.

Unit 8 (Kiln Nos. 14 and 15)

Kiln No. 14 was discovered during small-scale rescue excavations, during which the outer shell of Kiln No. 15 was also identified (Figs. 3/14, 15).[49] The kilns are positioned next to each other and most likely formed a single production unit. Kiln No. 14 is a complex kiln with two main corridors (Fig. 15). It is a large kiln (5.40* x 5.80 m), with the area of the combustion chamber covering c. 19.32* m². The combustion chamber was filled with numerous broken bricks and tiles, as well as several green ones. A single *tegula* with a LEGIIII stamp and four marked with the uncharacteristic stamp LEGVIICLATILIVIM were discovered in the upper chamber.[50]

More numerous finds of stamped CBM of the *Legio VII Claudia* indicate that the unit functioned sometime between the rule of Emperor Hadrian and the middle of the 3rd century.[51] The presence of CBM of the *legio IV Flavia* could indicate that production started in an earlier period (late 1st – early 2nd century),[52] but this cannot be stated categorically without further evidence.

ELEMENTS OF THE PRODUCTION PROCESS

As evidenced, CBM production at Viminacium was a vast and complex enterprise. In order to better understand it, further examination of the structures is needed from the perspective of the production process. Traditionally, this process can be divided into several stages,[53] which include procurement of the raw materials, their treatment – weathering, soaking and refinement, later shaping into products, their drying, firing and storage. Each phase had its own requirements and left its own material remains in the form of structures, artefacts, or different traces in the ground. Still, one has to bear in mind that it was not necessarily a uniform process and that many operations left no material impression and are, thus, undetectable.

Raw materials and their procurement

Clay with the right characteristics,[54] neither too "lean" nor too "greasy", was primarily extracted from large open pits. Preferably, the source material contained a mixture of clay, sand and silt, where each element contributed some necessary quality to the final product.[55] The region of Viminacium is known for good quality clay[56] and several extraction areas were identified on its territory, to the east,[57] north[58] and south[59] of the settlement and the camp. Except for the pits on the site of Pećine,[60] currently these cannot be associated with CBM production. The pits that served Units 2, 4 and 5 are large in volume – c. 45* m², 1,280 m² and 6,000* m² respectively,[61] which testifies to the longevity of their use and the volume of production. They were located in close proximity to the kilns, positioned in a way that best facilitated the manufacture process. The area between the kilns and the pit of Unit 2 was used for the manufacturing of products and we can state that a similar arrangement characterised Unit 5. Unit 4 exemplifies a different arrangement, as the kilns were positioned on the edge of the pit. The pits served multiple functions, as there is evidence that they were used for the preparation of the raw material and for storage of products, but it seems less likely that they also served as a workshop. The sources of clay for the production on the other sites remain unknown, but we can assume that they were located in the vicinity of the workshops.

The second essential element for CBM manufacture is water. It could be drawn from natural sources by water conducting and gathering systems (ditches,

---

49 Jevtović, Danković 2017; Jevtović, Danković 2022, 122.

50 Ibid.

51 Jevtović 2013, 45–46.

52 Various epigraphic evidence places the presence of the legion at Viminacium in the period of the late 1st – the early 2nd century and also sometime during the 3rd century (*cf.* Поповић 1968, 36–37; Mirković 1975, 907–908; Mirković 1986, 37–38; Ферјанчић 2002, 159–160).

53 McWhirr 1984, 50, fig. 49a; Maggetti 2001, 924; Fernandes et al. 2010, 30–31; Radivojević 2018, 81–82, fig. 36.

54 *Cf.* Pliny *Nat.* XXXV.49.169–173; Vitruvius *Arch.* II.3.1–3; II.8.16–17.

55 *Cf.* Rice 1987, 118–119; Wright 2005, 78; Quinn 2013, 154; Radivojević 2018, 81–82.

56 Jeremić 2001, 151–152; Jordović 1994, 96; Marrese et al. 2015, 13–14, fig. 4a, 16–17; Osnovna geološka karta SFRJ, list Bela Crkva, L 34–115.

57 *Cf.* Raičković, Milovanović 2010; Vuković 2010.

58 Danković, Petaković 2014, 61.

59 Валтровић 1884, 98–99; Mrđić 2009, 65, 164, 166.

60 Another large clay pit (55* x 19.6* m) was partially discovered during recent research of the northern part of the site, but at the moment it cannot be linked to the CBM production (*cf.* Redžić et al. 2021, 118–119).

61 Area wise, the closest analogy is the pit from Varbovski livadi (Pavlikeni, Bulgaria), which is significantly smaller, covering an area of 500 m² (Sultov 1985, 22).

62 Humphrey 2006, 36–38; Peacock 1982, 54; Swan 1984, 6.

aqueducts, pipes, or cisterns/reservoirs) or from wells.[62] The area of Viminacium is characterised by relatively high groundwater levels, due to the proximity of the Danube and Mlava rivers and the soil composition. For this reason, it seems that wells were a preferable choice,[63] as indicated by the finds from the sites of the Craftsmen Centre[64] and the site of Livade kod Ćuprije[65]. Additionally, it is believed that the production on the site Pirivoj was also supplied by a single or several wells.[66]

An often overlooked material used in the manufacturing of CBM was sand. It could be gathered by the mining of the geological layers in the open pits, or by utilising river beds. At this moment, the source of sand for CBM production of Viminacium cannot be determined.[67] There are some indications that geological layers discovered during the excavation of clay could have been used, but it is doubtful if these could have supplied adequate quantities of the material.

The last raw material requirement in the manufacturing process was fuel. No direct evidence for the type of fuel used in the manufactories of Viminacium has been discovered. It was probably some sort of biomass fuel, most probably wood and cereal chaff, but charcoal, coal or dung could also have been used.[68] Regardless of the material, large quantities were needed for firing each kiln[69] and it was obtained locally, as the woodlands, agricultural fields and marshy areas of Stig provided ample material.[70]

The treatment of raw materials and preparation of the final products

The second phase of production involved the treatment of raw materials for their final mixing and shaping into bricks and tiles. It included the stockpiling of raw clay in an open-air storage area, such as paved areas, basins, tanks, or pits, where it could be left to weather, crushed and ground, soaked, purified and enriched or thinned.[71] The only structures that were identified as such are the circular pits discovered on the site of Livade kod Ćuprije, although the authors[72] do not provide any details that could substantiate such an interpretation. Six pits from the Craftsmen Centre (Unit 2) and, even more likely, the rectangular pit from the vicinity of Unit 3 could have served the same purpose,[73] prior to their use for waste disposal. Unfortunately, none of these features can be directly associated with CBM production. The only concrete trace of this process was piles of clay lumps, discovered in the clay pits of Units 2 and 4. The lumps testify that the initial purification was performed during the excavation of the clay, but as the pit was used as a working area, it does not seem implausible to conclude that a section of the pit was designated for the preparation of the raw materials.

Further refinement, moulding and drying[74] of products was usually done in the open or, in the case of large-scale and more organised production, in special buildings of various complexity. These ranged from simple shelters, sheds or huts, to a single solid building that could even incorporate the kiln. The only remains identified as such structure(s) were found in the Craftsmen Centre (Unit 2), where single or multiple structures covered an area of c. 600 m². Analogous, porch-like, multi-aisled structures, interpreted as drying halls, were identified throughout the Empire, mostly in military production centres,[75] but also in privately owned workshops[76]. They vary in size and compared to Unit 2 structure(s), they can be smaller, as with the one in Vindobona (c. 182 m²),[77] or significantly larger, such as those in Hunzenschwil–Vindonissa[78] (>990 m²) or Xanten,[79] which was c. 60 m long. In other workshops of Viminacium moulding and drying was at least partially done in the open, as plenty of CBM carries impressions of paws, hoofs or claws.[80] Yet, as the drying was severely conditioned by climatic conditions,[81] the

63 Danković, Bogdanović 2017.

64 Јордовић 1994, 101.

65 Raičković, Redžić 2005, 87.

66 Jovičić, Milovanović 2017, 32.

67 The only trace of sand mining at Viminacium is a sandpit in the site of Rit, which at the moment cannot be associated with the ceramic production (Danković, Petaković 2014, 63).

68 McWhirr 1979, 100; Orton, Hughes 2013, 123–124; Rice 1987, 118–119; Rowan 2015, 465; Swan 1984, 6–7.

69 *Cf.* Mayes 1962; Peacock 1982, 25; Brandl, Federhofer 2010, 36.

70 Јордовић 1994, 96.

71 Adam 2005, 111; Radivojević 2018, 83.

72 Raičković, Redžić 2005, 87.

73 A similar tank/basin/pit was discovered in the pottery workshop of Marcus Perennius in Arezzo (Cuomo di Caprio 2007, 150).

74 *Cf.* McWhirr 1984, 101–102.

75 *Cf.* Mosser 2015, 67, footnote 39; Deschler–Erb 2012, 41, footnote 82 with given literature.

76 Aubert 1994, 206; Ventura, Cividini 2011, 9.

77 Mosser 2015, 67.

78 Schaer 2005, 48 f. Figs. 10 and 11; Deschler–Erb 2012, 44.

79 According to Mosser 2015, 67.

80 Jevtović *in prep*.

81 Fernandes et al. 2010, 3.

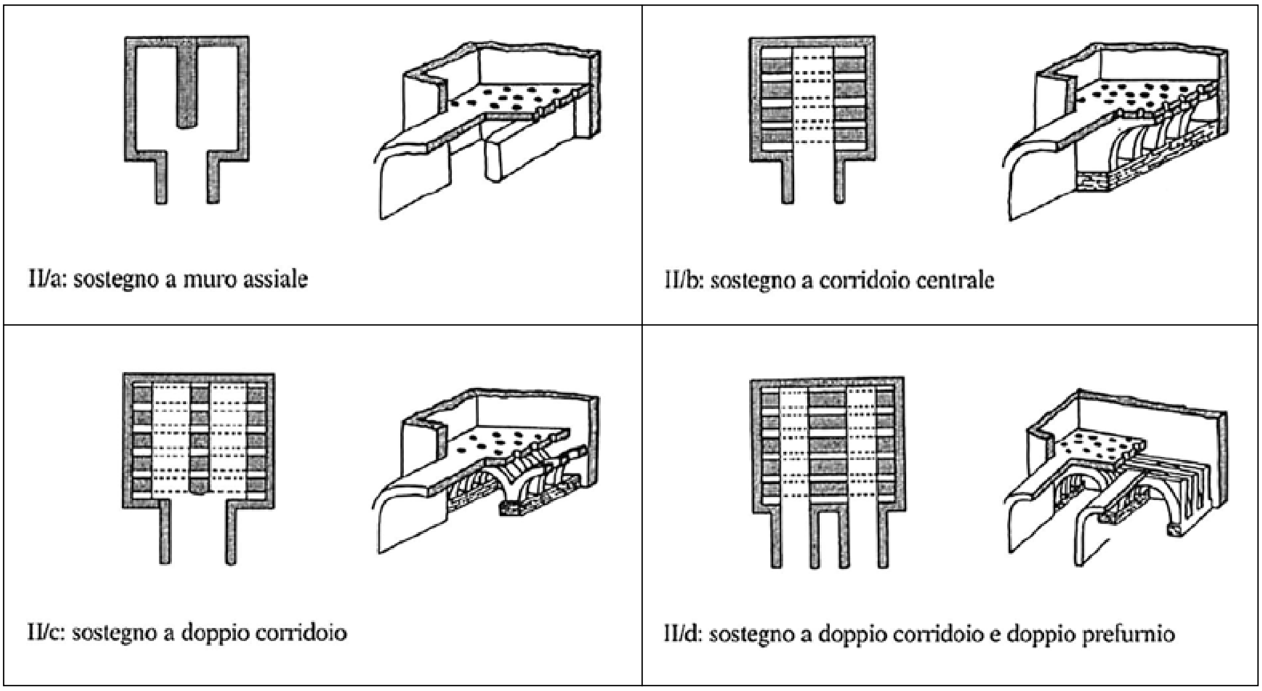


Fig. 16. Typology of kilns based on the plan of the lower part of the kiln and the type of support for the upper structure (after: Cuomo di Caprio 2007, 524, Fig. 169)

Сл. 16. Типологија пећи према основи доње коморе и изгледу носача решетке (према: Cuomo di Caprio 2007, 524, Fig. 169)

material had to be protected, either by covering it with straw or sand,[82] or by use of simple shelters or porches.

Firing

The final stage of the manufacturing process was the firing.[83] All the kilns used for firing CBM on the territory of Viminacium were quadrangular two-chambered kilns with a vertical draught, typical of the Roman Empire.[84] For the purpose of this paper, we will use the standard classification, developed by N. Cuomo di Caprio (1978/1979), based upon the plan of the lower part of the kiln and the type of support for the upper structure (Fig. 16). Two types of these kilns are identified among 14 kilns found at Viminacium, while one kiln (Kiln No. 15) cannot be associated to any type (Table 1).

Quadrangular kilns with a single corridor (type II/b)

The majority of kilns (No. 1–4, 6–10) belong to the simpler type of quadrangular kilns with a single corridor (type II/b). It is one of the most common types of quadrangular kilns in the Empire and the most common type on the territory of Moesia and the surrounding provinces. Five kilns of this type were discovered on the territory of Moesia Superior,[85] eleven in Pannonia Inferior,[86] twelve on the territory of Dalmatia[87] and fifteen on the territory of modern-day Bulgaria[88]. The kilns from the site of Provalije (No. 11–13) probably also belong to this type. However, they can also be identified as type II/a – a quadrangular kiln with a central wall, even though none of the quadrangular kilns from Viminacium belong to this type.

---

[82] *Cf.* Nolla et al. 1982, 152–156.

[83] *Cf.* McWhirr 1984, 103; Cuomo di Caprio 1972, 442.

[84] Le Ny 1988, 19–29.

[85] Марић 1951, 121–123; Бућић, Петровић 1984, 8; Љамић–Валовић 1985; Минић 1990.

[86] Dimitrijević 1969, 108; Jeremić 2000; Vámos 2010, 68; Dobosi 2021.

[87] D'Inca et al. 2010, 315–318; Kovačić et al. 2011, 519–521; Lipovac Vrkljan, Šiljeg 2012, 22–28; Lipovac Vrkljan 2016, 41–52; Silajdžić 2018, 234–235.

[88] Харизанов 2019, 358–359, Table 2.4.

KILN No.	SITE-UNIT	TYPE	KILN PLAN DIMENSIONS (m)	KILN HEIGHT (m)	CROSS FLUES (No.)	GRILL THICKNESS (m)	OVEN PLAN DIMENSIONS (m)	PRESERVED OVEN HEIGHT (m)	PRAEFURNIUM PLAN DIMENSIONS (m)
1	Pirivoj - Unit 1	II/b	4.30 x 2.90	2.30	6	0.15	2.70 x 2.50	0.70	1.05 x 0.90
2	Pećine - Unit 2	II/b	4.85 x 3.90	3.10	6	0.37	3.10 x 2.80	1.60	1.30 x 1.00
3	Pećine - Unit 2	II/b	3.80* x 4.00	3.35	5*	0.47	2.60 x 2.75	1.66	0.90* x 0.80
4	Pećine - Unit 2	II/b	5.05 x 4.00	3.50	6	/	3.30 x 2.80	1.60	0.75* x 1.10
5	Pećine - Unit 3	II/d	7.30* x 3.80	1.95	9	/	/	/	/
6	Pećine - Unit 4	II/b	4.30 x 2.95	2.85	4	0.40	2.70 x 2.55	1.10	1.00 x 0.90
7	Pećine - Unit 4	II/b	5.50 x 4.00	> 3.00	4	0.45-0.60?	3.40 x 3.55	1.00	1.30 x 1.00
8	Pećine - Unit 5	II/b	6.76 x 4.60	3.30	6	0.23	4.00 x 3.85	1.25	2.15 x 1.80
9	Livade kod Ćuprije - Unit 6	II/b	4.80 x 2.75	1.60	3	/	2.20 x 2.15	0.40	0.85 x 0.80
10	Livade kod Ćuprije - Unit 6	II/b	3.85* x 3.25	1.80	/	/	2.10 x 2.60	0.50	/
11	Provalije - Unit 7	II/a-b	3.10 x 3.50	/	/	/	/	/	/
12	Provalije - Unit 7	II/a-b	2.60 x 2.70	/	/	/	/	/	/
13	Provalije - Unit 7	II/a-b	/	/	/	/	/	/	/
14	Provalije - Unit 8	II/d	5,40* x 5,80	3.55	6*		4.20* x 4.60	1.60	/
15	Provalije - Unit 8	/	/	/	/	/	/	/	/

Table 1. Characteristics and dimensions of CBM kilns of Viminacium

Табела 1. Карактеристике и димензије опекарских пећи са Виминацијума

The kilns of this type from Viminacium range in size between 2.60 x 2.70 m (No. 12) and 6.76 x 4.60 m (No. 8) (Table 1).[89] Generally, most of the kilns from Viminacium (No. 1–4, 6–8) have an oven area greater than 6.50 m², which can be considered a larger variant. The remaining four kilns (Nos. 9–12) have an oven area smaller than 5.50 m². Compared to the other kilns from Moesia and the surrounding provinces, kilns from Viminacium fall into the larger part of the spectrum.

Construction-wise, all kilns from Viminacium are similar in plan and construction materials, but each slightly differs in details of their construction techniques. The materials used in the construction, fired brick and tiles, adobe, mud, clay and daub, were commonplace throughout the Empire. Thus, no chronological, regional or even local characteristics could be detected in the case of these kilns. The only significant difference was the use of true arches instead of corbelled ones,[90] as opposed to all of the kilns from Moesia, except for the one at Margum (today Dubravica)[91].

Quadrilateral kilns with two corridors (type II/d)

Two kilns (Nos. 5 and 14) belong to the more complex type of quadrilateral kilns with two corridors (type II/d). Both were damaged, but, based on the preserved parts, their oven area was larger than 20 m², which is almost double the capacity of the previously discussed type (Table 1). This type of kiln was rare, but was present throughout the Empire, even though its construction elements varied drastically. Considering the vicinity of Viminacium and the neighbouring provinces, two kilns each were discovered on the ter-

89 The dimensions of Kilns Nos. 13 and 15 are not known, although Kiln No. 13 most likely falls into the lower part of the spectrum and Kiln No. 15 into the larger.

90 Unfortunately, we do not know if the Kilns Nos. 9–13 and 15 had true or corbelled arches.

91 Марић 1951, 121–123.

ritories of Mosia Superior,[92] Moesia Inferior[93] and Pannonia Inferior[94], while one was excavated in Dalmatia[95] and one in Dacia[96]. Kilns of this type were usually large, but could also be small, such as Kiln No. 2 from Sirmium[97], whose internal dimensions are 3.20 x 2.20 m, or the one from Romula,[98] which is slightly larger – 4.12 x 3.75 m.

Although both kilns fall into the same type, and standard materials were used in their construction, they are significantly different. To name just the major differences compared to their standard features – Kiln No. 14 had arches made out of two courses of bricks instead of one, while Kiln No. 5 had no back wall.

Specialisation of production

Our research points to the conclusion that in Viminacium, CBM was made exclusively in quadrangular kilns of the mentioned types. Still, numerous discoveries have shown that the shape of the kiln is not a deterministic factor in regards to the product.[99] The mixed loads of Kilns Nos. 3 and 4 (CBM, pottery and terracotta) suggest that their load was occasionally supplemented by a variety of other ceramic material. This phenomenon does not link to the size and complexity of the kilns, but rather to the size, organisation and production repertoire of the workshops. Larger and more organised workshops often had both circular and quadrangular kilns and simultaneously produced various types of ceramic material. It was economical and practical to make use of the occasional free space in the quadrangular kilns to supplement the production of smaller objects. Based on the current evidence, it is possible that at least one of the circular kilns discovered in the workshop of Livade kod Ćuprije (Unit 6) and some from Unit 2 (i.e., the Craftsmen Centre) could have operated simultaneously with the CBM manufactories.

Housing, storage and waste disposal

No support facilities were identified in the territory of Viminacium, neither for the accommodation of workers nor for the storage of tools,[100] materials or products. It seems likely that the vicinity of the camp and the settlement negated the need for housing and storage infrastructure at the sites of Pirivoj, Pećine and Livade kod Ćuprije. Some may have existed in the site of Provalije – TEKO A, but the site has only been moderately excavated. Finished CBM products were probably stored in the open, which is exemplified by the stacks of bricks from the pit of Unit 4 (Fig. 11).

The production process created a lot of waste in the form of debris from the firing of the kilns, as well as wasters. However, only a comparatively few waste pits could be identified. The clay pit on the site of Pećine served as a dumping area during the firing of the kilns, and a few smaller pits were identified in the more thoroughly excavated sites of Pećine and Livade kod Ćuprije. These pits could have been used in the beginning phases of the production process as a source of raw material and only later used for the disposal of wasters and other leftovers from the production process.

DISCUSSION ON THE MODES OF PRODUCTION

Archaeological research of the CBM industries of Viminacium has identified four production areas, and our study allows us to divide them into two groups, considering two distinct modes of production, where each would have been characterised by its own organisation, structures and requirements.

Large scale production (Units 2–5 and 7–8)

Large scale production was identified at the sites of Pećine and Provalije – TEKO A. Each production area comprised of several workshops (i.e., production units), which were operated by the *Legio VII Claudia*[101] and the latter perhaps in cooperation with the *Legio IIII Flavia*.[102] Judging by the layout of Units 2 and 4, the production was characterised by a high degree of

---

[92] Caričin Grad and on the site Crnoklište – Gornje polje (SO Pirot).

[93] Атанасов, Ганчева 2019, 359–361; Атанасов et al. *in press*.

[94] Iskra–Janošić 1993, 198; Jeremić 2000, 143–144.

[95] Gluščević 1989, 73–74.

[96] Tentea, Ratiu 2014, 218.

[97] Jeremić 2000, 143–144.

[98] Tentea, Ratiu 2014, 218.

[99] As evidenced by two kilns discovered in Viminacium (Kiln 6 from the Craftsmen Centre and the kiln from the site of Više Grobalja) (Јордовић 1994, 97–98; Jovičić et al. 2021, 133–141). *Cf.* Romeuf, Dumontet 1973; Peacock 1982, 69; Cuomo di Caprio 1972, 435.

[100] No tools that could have been used in any phase of the production process were ever identified, although some of the agricultural tools might have been used (*cf.* Ilić, Jovičić 2021)

[101] For the presence of *Legio VII Claudia* in Viminacium *cf.* Benea 1983, 33, 42–75; Mirković 1986, 35–43.

organisation and specialisation. Their area, c. 1,280 m² and 800 m², places them in the category of larger workshops (>300–400 m²).[103] Their layout exhibits a high degree of rationality, as both the clay pit and the drying hall served multiple functions and were positioned in a way that best facilitated the production process and the organisation of labour. Unfortunately, the available data for Units 3 and 5 is not sufficient to provide any insight into its organisation of production. The same is true for production on the site of Provalije, although the sheer number, complexity and size of the discovered kilns indicate that it was a major production area with several workshops and large and organised production.

The kilns were commonly organised into batteries, each comprising two to three kilns around a common work platform, used during the firing of the kilns and for the storage of fuel. This practice was common and was used to ensure the easier and faster operation of the structures.[104] The pinnacle of this principle was the fusing of kilns into a single structure, a so-called "brick-plant", which is noted in Unit 2. Such structures are characteristic of a highly organised and continuous production. The only exception to the above-mentioned practice is Unit 3 with Kiln No. 5, which appears to be a stand-alone. The explanation for this may lie in the size of the kiln, or the proximity to the other production units.

Military brickyards primarily operated simple kilns of the type II/b, but also the only two kilns of the complex type II/d. Compared to the other kilns from Viminacium, they fall into the category of larger kilns. This is in concordance with the general assumption that the kilns of higher capacity and greater complexity would be associated with better organised and larger workshops. Various techniques were employed in the construction of the kilns and, as already stated, not a single one was identical to another. This implies that their construction depended primarily on the experience and the skill of the builder.

The kilns were primarily used to produce CBM, but the finds of pottery and terracotta from the kilns of Unit 2 suggest that they may occasionally have been used to produce other ceramic material, most likely to supplement the burning stock of CBM. Additionally, some circular kilns discovered in the area of Units 2, 3 and Provalije – TEKO A may have been concurrent with the quadrangular kilns. Altogether, this suggests that the *Legio VII Claudia* produced various ceramic products[105] (pottery, lamps, terracotta, etc.) and, although there is ample evidence that the military units were engaged in the production of various ceramic items,[106] until more straightforward evidence comes to light, this must remain only a hypothesis.

Other production (Units 1 and 6)

The production of CBM in the sites of Pirivoj (Unit 1) and Livade kod Ćuprije (Unit 6) is harder to analyse, due to the nature and extent of excavation work and the available data. The immediate surroundings of the kiln at Pirivoj have not been excavated, but there are indications that it was part of a battery. This, and the adjacency of a major road could imply that it was part of a large workshop. The kilns in Livade kod Ćuprije were seemingly isolated and their relationship to the nearby objects is impossible to define. As no products could be linked to the output of either workshop, it is impossible to determine the owners of the kilns, what they were producing, or their designated market. The proximity of both sites to the other military installations prompted the authors[107] to suggest that the kilns were part of the military production, but their position, differences in kiln size and the lack of stamped CBM make this less likely. They may have been privately owned, even if private CBM production was poorly documented in Viminacium.[108] If this was the case, they were most likely an estate production model[109] or, less likely, a peripatetic production model (i.e., mobile brickworks)[110]. Both models imply that the products were made for a predetermined purpose, to meet the demands of a single estate or object, or to supply construction works located in its vicinity. In both models, the requirement for tools and produc-

[102] The cooperation between these two legions is well attested on the territory of Viminacium (Vasić 1905, 108), unequivocally in the CBM industry by a find of a tegula with the stamp LEGIIIIFETVII, discovered built into one of the aqueducts of the city (Mrđić 2007, 25).

[103] Hasaki 2006, 225.

[104] *Cf.* Sultov 1985, 40; Hasaki 2002, 271.

[105] Raičković, Redžić 2005, 87.

[106] This is best exemplified by rare finds of military stamped pottery and lamps discovered in Nijmegen (Willems 1989, 213), Vindonissa (Schaer 2005, 45), Vindobona (Chinelli et al. 2018), Brigetio, Cannstatt and Aquincum (Peacock 1982, 147, 161; Vámos 2012).

[107] Jovičić, Redžić 2012; Jovičić, Milovanović 2017, 32.

[108] Contrary to the claims of some authors (Mirković 1968: 141; Spasić–Đurić 2002: 144).

[109] Peacock 1982, 10, 129–135; McWhirr 1984, 47–48; Darvill, McWhirr 1984, 255–256.

[110] McWhirr 1984, 44–47; Darvill, McWhirr 1984, 254–255.

tion objects was minimal, the clay would be excavated in the vicinity, and the production was seasonal and organised to meet current needs.

CONCLUSIONS

The study gives a general outline of the CBM production in Viminacium, based on the current state of research. Unfortunately, virtually all the finds presented in this study have come to light during the limited rescue excavations, which has, thus, limited our ability the reconstruct the workshops. The layout of the manufacturing sites and the analysis of the structures allowed some insight into the production process and discussion of its organisation. It is obvious that the military was the main producer of CBM in Viminacium. It operated two large-scale production areas with several workshops, which were characterised by highly organised production and high output. The manufacture was located on two additional sites, but the lack of adequate data makes any detailed analysis of its production difficult.

Our study shows that the CBM production in Viminacium was a major enterprise. Yet, it is nothing more than the latest step in a long research journey, as it exemplifies that many aspects require further investigation. It is our belief that the perquisite for any future study should be a more thorough chronological analysis of the discovered sites and finds. This will provide a better understanding of the development of CBM production in Viminacium. Additionally, an in-depth interdisciplinary study of both the structures and the products (CBM and other various ceramic finds) is needed. This will provide an insight into other economic aspects of production, especially defining the products of the individual workshops, their distribution, designated markets and usage, as well as those factors that influenced the whole production process. Luckily, as vast portions of the site remain unexplored, we are certain that future discoveries in conjunction with further study of previously discovered remains and finds will provide additional insight into the intricacies of the CBM industry of ancient Viminacium and, more importantly, its usage, as it truly was one of the key building materials of ancient Viminacium.

Acknowledgements

This paper would not be possible without the help of Alexander Harizanov (National Archaeological Institute with Museum, Bulgarian Academy of Sciences) and Tomáš Janek (National Museum in Prague, Department of Prehistory and Classical Antiquity) that provided their great knowledge of the subject. Additionally, it would not see the light of day without the wise insights and encouragement of my dear compatriot, colleague and friend Ivan Bogdanović (Institute of archaeology, Belgrade) to whom I am in debt. I would also like to thank my colleagues Željko Jovanović, Milan Milovanović and Ivan Marjanović from the Centre for the New technologies Viminacium for their technical prowess and patience.

BIBLIOGRAPHY:

Sources:

Pliny ***Nat.*** – Caius Plinius Secundus, *Historia Naturalis* (Pliny the Elder, The Natural History, John Bostock, M.D., F.R.S., H.T. Riley, Esq., B.A., Ed. – Perseus Digital Library – https://www.perseus.tufts.edu/hopper/text?doc=Perseus:text:1999.02.0137 – retrieved 30.10.2021).

Vitruvius ***Arch.*** – Vitruvius Pollio, *De architectura* (Vitruvius Pollio, The Ten Books on Architecture, Morris Hicky Morgan, Ed. – Perseus Digital Library – https://www.perseus.tufts.edu/hopper/text?doc=Perseus:text:1999.02.0073 – retrieved 30.10.2021).

References:

Adam 2005 – J. P. Adam, Roman Building materials and techniques, London 2005.

Aubert 1994 – J. J. Aubert, Business Managers in Ancient Rome: A Social and Economic Study of Institores, 200 B.C. –A.D. 250, University Microfilms, Leiden, New York, Koln.

Атанасов, Ганчева 2019 – Г. Атанасов, С. Ганчева, Късноантична, османска и съвременна пещи за строителна керамика в extra muros на Durostorumи и в покрайнините на Силистра, in: *Културно-историческото наследство – памет за бъдещето: Сборник доклади, изнесени на национална научна конференция, посветена на 130 години музейно дело в Разград*, Разград, 5–6 октомври 2017 година, Велико Търново 2019, 359–379. (G. Atanasov, S. Gančeva, Kasnoantična, osmanska i savremena peci za stroitelna keramika v extra muros na Durostorumi i v pokraininite na Silistra, u: *Kulturno-istoričeskoto nasledstvo – pamet za bъdeщeto: Sbornik dokladi, izneseni na nacionalna naučna konferencія, posvetena na 130 godini muzeйno delo v Razgrad*, Razgrad, 5–6 Oktobar 2017 godina, Veliko Trnovo 2019, 359–379.)

Атанасов et al. ***in press*** – Г. Атанасов, К. Михайлов, С. Ганчева, Спасителни археологически разкопки на късноантична пещ за изпичане на тухли в гр. Силистра, *Археологически открития и разкопки* 2020, *in press*. (G. Atanasov, K. Mihailov, S. Gančeva, Spasitelni arheologičeski razkopki na kasnoantična peč za izpičane na tuhli v gr. Silistra, *Arheologičeski otkritia i razkopki* 2020, *in press*)

Benea 1983 – D. Benea, *Din istoria militară a Moesiei Superior și a Daciei – Legiunea a VII–a Claudia și legiunea a IIII–a Flavia*. Cluj–Napoca 1983.

Brandl, Federhofer 2010 – U. Brandl, E. Federhofer, *TON + TECHNIK. Römische Ziegel*, Stuttgart 2010.

Бућић, Петровић 1984 – J. Бућић, П. Петровић, Римске цигларске пећи и вила у Бакионици код Пожеге, *Ужички зборник 13*, 1984, 5–22. (J. Bućić, P. Petrović, Rimske ciglarske peći i vila u Bakionici kod Požege, *Užički zbornik 13*, 1984, 5–22.)

Chinelli et al. 2018 – R. Chinelli, R. Wedenig, S. Jäger–Wersonig, K. Adler–Wölfl, Latinus fecit mortaria. Reibschüsseln mit Legionsstempel, hergestellt in Vindobona, *Fundort Wien Berichte zur Archäologie 21*, 2018, 92–119.

Cuomo di Caprio 1972 – N. Cuomo di Caprio, Proposta di classificazione delle fornaci per ceramica e laterizi nell'area italiana, dalla preistoria e tutta l'epoca romana, *Sibrium 11*, 1972, 371–464.

Cuomo di Caprio 1978/1979 – N. Cuomo di Caprio, Updraught pottery kilns and tile kilns in Italy in pre–Roman and Roman times, *Acta Praehistorica et Archaeologica 9/10*, 1978/9, 23–31.

Cuomo di Caprio 2007 – N. Cuomo di Caprio, *La ceramica in archeologia, 2: antiche tecniche di lavorazione e moderni metodi di indagine*, Rome 2007.

Danković 2015 – I. Danković, Route of the Eastern Road of Viminacium, in: *Limes XXII: Proceedings of the 22nd International Congress of Roman Frontier Studies, Ruse, Bulgaria, September 2012*, (eds.) L. Vagalinski, N. Sharankov, Sofia 2015, 557–562.

Danković, Bogdanović 2017 – I. Danković, A. Bogdanović, Contribution to the knowledge of Viminacium's water supply, *Arheovest V1*, 469–481.

Danković, Petaković 2014 – I. Danković, S. Petaković, Istraživanja na lokalitetu Rit (Viminacijum), in: *Arheologija u Srbiji. Projekti Arheološkog instituta u 2013. godini*, (ed.) D. Antonović, Beograd 2014, 60–63.

Danković et al. 2018 – I. Danković, B. Milovanović, I. Mikić, Zaštitna arheološka iskopavanja na lokalitetu Pirivoj (Viminacijum) 2016. godine, in: *Arheologija u Srbiji. Projekti Arheološkog instituta u 2016. godini*, (eds.) I. Bugarski, N. Gavrilović Vitas & V. Filipović, Beograd 2018, 35–42.

Darvill, McWhirr 1984 – Tim Darvill & Alan McWhirr, Brick and Tile Production in Roman Britain: Models of Economic Organisation, *World Archaeology, Vol. 15, No. 3, Ceramics*, 1984, 239–261.

Deschler–Erb 2012 – E. Deschler–Erb, 2.1.2. Tonverarbeitung. in: *Das römerzeitliche Handwerk in der Schweiz. Bestandsaufnahme und erste Synthesen. Monographies instrumentum 40*, H. Amrein, E. Carlevaro, E. Deschler–Erb, S. Deschler–Erb, A. Duvauchelle, L. Pernet (eds.), Montagnac 2012, 29–48.

Dimitrijević 1969 – D. Dimitrijević, Istraživanje rimskog limesa u Istočnom Sremu s posebnim osvrtom na pitanje komunikacija, *Osječki Zbornik XII*, 1969, 81–121.

D'Inca *et al.* 2010 – C. D'inca, V. Kovačić, A. Marchiori, Y. Marion, G. Rosada, C. Rousse, F. Tassaux, M. Zabeo, Loron – Lorun, Parenzo – Poreč, Istria. Una villa maritima nell'agro Parentino: La campagna di ricerca 2009, *Histria Antiqua 19*, 2010, 313–327.

Dobosi 2021 – L. Dobosi, Brick and tile kilns in Roman Pannonia – A state of research, *Acta Archaeologica 72*, 2021, 27–53.

Dušanić 1978 – M. Dušanić, Ripa legionis: pars superior, *Arheološki Vestnik 29,* 1978, 343–345.

Fernandes et al. 2010 – F. M. Fernandes, P. B. Lourenço & F. Castro, Ancient Clay Bricks: Manufacture and Properties, in: *Materials, Technologies and Practice in Historic Heritage Structures*, M. Bostenaru Dan, R. Přikryl, Á. Török, (eds.), London 2010, 29–48.

Ферјанчић 2002 – С. Ферјанчић, *Насељавање леīијских вешерана у Балканским йровинцијама I–III век н.е.*, Београд 2002. (S. Ferjančić, *Naseljavanje legijskih veterana u Balkanskim provincijama I–III vek n.e.*, Beograd 2002.)

Gluščević 1989 – S. Gluščević, Antička keramika s otoka Paga, in: *Arheološka istraživanja na otocima Krku, Rabu, Pagu i u Hrvatskom primorju*, Zagreb 1989, 73–88.

Харизанов 2019 – А. Харизанов, Пещи за керамика в днешните български земи през I–VI век, София, 2019. (A. Harizanov, *Ceramic kilns in the territory of modern day Bulgaria*, Sofia 2019.)

Hasaki 2002 – E. Hasaki, Ceramic kilns in ancient Greece: Technology and organization of ceramic workshops, PhD thesis, University of Cincinnati, 2002.

Hasaki 2006 – E. Hasaki, Ancient Greek ceramic kilns and their contribution to the technology and organization of the potter's workshops, in: *Proceedings of the 2nd International Conference on Ancient Greek Technology*, (eds.) P. Tasios, C. Palyvou, Athens 2006, 221–227.

Humphrey 2006 – J. W. Humphrey, Ancient technology, Westport 2006.

Ilić, Jovičić 2021 – O. Ilić, M. Jovičić, Roman agricultural tools in the ager of Viminacium (Резиме: Римско пољопривредно оруђе у агеру Виминацијума), *Starinar LXXI/ 2021*, 2021, 181–206.

Iskra-Janošić 2001 – I. Iskra-Janošić, *Urbanizacija Cibala i razvoj Keramičkih središta*, Zagreb – Vinkovci 2001.

Jeremić 2000 – M. Jeremić, Brick kilns in Sirmium (Резиме: Цигларске пећи Сирмијума), *Starinar L*, 2000, 131–154.

Jevtović 2013 – Lj. Jevtović, Nalazi opeka sa pečatom VII Klaudijeve legije na teritoriji provincije Gornje Mezije, Unpublished MA thesis, Univerzitet u Beogradu, 2013.

Jevtović, Danković 2017 – Lj. Jevtović, I. Danković, *Novi nalaz rimskih opekarskih peći u krugu termoelektrane „Kostolac A"*, Paper presented at the XL Annual meeting of the Serbian Archaeological society, June, 5–9 2017 in Belgrade, Serbia.

Jevtović, Danković 2022 – Lj. Jevtović, I. Danković, An overview of the CBM industries of ancient Viminacium, in: *Roman ceramic and glass manufactures, Production and Trade in the Adriatic region and beyond. Proceedings of the 4th International archaeological colloquium, Crikvenica (Croatia), 8th–9th November 2017. Archaeopress Roman Archaeology 94*, G. Lipovac Vrkljan, A. Konestra, A. Eterović Borzić (eds.), Oxford 2022, 117–124.

Jevtović *in prep.* – Lj. Jevtović, *Opekarska industrija VII Klaudijeve legije*, PhD thesis, University of Belgrade, *in prep*.

Јордовић 1994 – Ч. Јордовић, Грнчарски и цигларски центар у Виминацијуму, *Саойшења XXVI,* 1994, 95–105. (Č. Jordović, Grnčarski i ciglarski centar u Viminacijumu, *Saopštenja XXVI,* 1994, 95–105.)

Jovičić, Redžić 2012 – M. Jovičić, S. Redžić, Late Roman villa on the site Livade kod Ćuprije – A contribution to the study of villae rusticae in the vicinity of Viminacium, *Arheologija i Prirodne nauke (Archaeology and Science) 7 (2011),* 2012, 369–386.

Jovičić et al. 2021 – M. Jovičić, S. Redžić, B. Milovanović, Zaštitna arheološka istraživanja nekropole na lokalitetu Više grobalja (Viminacijum) u 2018. godini, in: *Arheologija u Srbiji, projekti Arheološkog instituta u 2018. godini*, (eds.) S. Vitezović, M. Radišić and Đ. Obradović, Beograd 2021, 129–143.

Jovičić, Milovanović 2017 – M. Jovičić, B. Milovanović, Roman brick kiln from the eastern necropolis of Viminacium, *Arheologija i Prirodne nauke (Archaeology and Science) 12 (2016)*, 2017, 19–38.

Јуришић 1956 – А. Јуришић, Археолошки радови, *Саойшења I,* 1956, 123–138. (A. Jurišić, Arheološki radovi, *Saopštenja I,* 1956, 123–138.)

Kovačić *et al.* 2011 – V. Kovačić, A. Marchiori, Y. Marion, G. Rosada, C. Rousse, F. Tassaux, Loron – Lorun, Parenzo – Poreč, Istria. Una villa maritima nell'agro Parentino: La campagna di ricerca 2010, *Histria Antiqua 20*, 2011, 515–525.

Kurzmann 2005 – R. Kurzmann, Soldiers or Emperors? Some problems with imperial titles on roman military brick stamps, in: *Limes XIX Proceedings of the XIX*[th] *International Congres of Roman Frontier Studies,* (eds.) Z. Visy, Pécs 2005, 327–336.

Le Ny 1988 – F. Le Ny, *Les Fours de Tuiliers Gallo–Romaines*, Paris 1988.

Lipovac Vrkljan 2016 – G. Lipovac Vrkljan, Osnutak i djelovanje keramičarske radionice, in: *845 °C – Ad turres*, Crikvenica 2016, 41–52.

Lipovac Vrkljan, Šiljeg 2012 –G. Lipovac Vrkljan, B. Šiljeg, Prilog antičkoj topografiji otoka Raba – rimska keramičarska peć na otoku Loparu, *Senjski zbornik 39*, 2012, 5–34.

Maggetti 2001 – M. Maggetti, Chemical Analyses of Ancient Ceramics: What for?, Chimia 55, 2001, 923–930.

Mayes 1962 – Ph. Mayes, The firing of a second pottery kiln of romanobritish type at Boston, Lincolnshire, *Archeometry 5*, 80–86.

Марић 1951 – Р. Марић, Ископавања на Орашју (Resume: Les fouilles d'Orašje), *Старинар II, нова серија, књига 2*, 1951, 111–132. (R. Marić, Iskopavanja na Orašju, *Starinar II, nova serija, knjiga 2*, 1951, 111–132.)

Marrese et al. 2015 – G. Marrese, P. Tucci, A. Raičković Savić, Roman pottery from Viminacium (Serbia 2nd–3rd centuries): compositional characteristics, production and technological aspects, *Arheologija i prirodne nauke (Archaeology and Science) 10 (2014)*, 2015, 9–43.

McWhirr 1979 – A. McWhirr, Tile–kilns in Roman Britain, in: *Roman brick and tile: studies in manufacture, distribution and use in the Western Empire*, *BAR international series, 68*, (ed.) A. McWhirr, Oxford 1979, 97–190.

McWhirr 1984 – A. McWhirr, The production and distribution of brick and tile in roman Britain, PhD thesis, University of Leicester 1984.

Минић 1990 – Д. Минић, Цигларска пећ из Сталаћа (Resume: Brick kiln from Stalać), *Старинар XL–XLI* 1988–1990, 1990, 309–315. (D. Minić, Ciglarska peć iz Stalaća, *Starinar XL–XLI* 1988–1990, 1990, 309–315.)

Mirković 1968 – M. Mirković, Rimski gradovi na Dunavu u gornjoj Meziji, Beograd 1968.

Mirković 1975 – M. Mirković, Legija IV Flavija i logor u Viminacijumu, *Arheološki Vestnik XXIV (1973)*, 1975, 906–908.

Mirković 1977 – M. Mirković, Septimius Severus und der legio VII Claudia Antoniniana, *Arheološki Vestnik XXVIII,* 1977, 183–187.

Mirković 1986 – M. Mirković, *Inscriptions de la Mésie Supérieure, Volume II, Viminacium et Margum*, Beograd 1986.

Mirković 2007 – M. Mirković, *Moesia Superior – Eine provinz an der Mittleren Donau*, Mainz am Rhein 2007.

Mosser 2015 – M. Mosser, Die Legionsziegelei von Vindobona im 17. Wiener Gemeindebezirk, *Fundort Wien Berichte zur Archäologie 18*, 2015, 50–93.

Mrđić 2007 – N. Mrđić, *Snabdevanje vodom u antici na prostoru Gornje Mezije i jugoistočnog dela Donje Panonije*, Beograd 2007.

Mrđić 2009 – N. Mrđić, *Topografija i urbanizacija Viminacijuma*, Unpublished MA thesis, University of Belgrade 2009.

Nikolić 2013 – E. Nikolić, Contribution to the study of roman architecture in Viminacium: construction materials and building techniques, *Arheologija i prirodne nauke (Archaeology and Science) 8 (2012)*, 2013, 21–48.

Nolla et al. 1982 – J. M. Nolla, J. M. Canes, X. Rocas, Un forn de terrissa a Llafranc, Palafrugell, Baix Empordà). Excavacions de 1980–1981, *Empúries 44*, 1982, 147–183.

Orlov 1960 – G. Orlov, Teritorija bivšeg Viminacijuma kao numizmatičko nalazište, *Zbornik Filozofskog fakulteta V/1*, 1960, 313–321.

Orton, Hughes 2013 – C. Orton, M. Hughes, *Pottery in Archaeology*, Cambridge University Press, 2013.

Peacock 1982 – D. P. S. Peacock, *Pottery in the Roman world, an ethnoarchaeological approach*, London and New York, 1982.

Поповић 1968 – В. Поповић, Увод у топографију Виминацијума (Resume: Introduction a la topograpfie de Viminacium), *Старинар* XVIII/1967, 1968, 29–50. (V. Popović, Uvod u topografiju Viminacijuma, *Starinar* XVIII/1967, 1968, 29–50.)

Quinn 2013 – P. S. Quinn, *Ceramic Petrography. The Interpretation of Archaeological Pottery & Related Artefacts in Thin Section*, Oxford 2013.

Radivojević 2018 – A. Radivojević, Opeke u kasnoj antici. Zapisi u materijalu, Beograd, 2018.

Raičković 2007 – A. Raičković, *Keramičke posude iz Zanatskog centra iz Viminacijuma*, Beograd 2007.

Raičković, Redžić 2005 – A. Raičković, S. Redžić, Keramičke i opekarske peći Viminacijuma – lokacije „Pećine" i „Livade kod Ćuprije", *Arheologija i prirodne nauke (Archaeology and Science)* 1, 2005, 81–106.

Raičković, Milovanović 2010 – A. Raičković, B. Milovanović, Rezultati istraživanja jugozapadnog dela lokaliteta Pirivoj (Viminacijum), *Arheologija i Prirodne nauke (Archaeology and Science) 5*, 2010, 7–56.

Raičković et al. 2006 – A. Raičković, S. Redžić, B. Milovanović, Posude sa apliciranim zmijama iz Zanatskog Centra, *Arheologija i prirodne nauke (Archaeology and Science) 2*, 2006, 69–76.

Redžić et al. 2018a – S. Redžić, M. Jovičić, N. Mrđić & D. Rogić, Zaštitna arheološka istraživanja na lokalitetu Pećine (Viminacijum) 2016. godine, in: *Arheologija u Srbiji, projekti Arheološkog instituta u 2016. godini*, (eds.) I. Bugarski, N. Gavrilović Vitas and Vojislav Filipović, Beograd 2018, 79–91.

Redžić et al. 2018b – S. Redžić, I. Kosanović, M. Jovičić & Lj. Jevtović, New evidence of brick production at Viminacium. *24. LIMES CONGRESS Serbia 02–09 September 2018 Belgrade – Viminacium*, Book of abstracts, (eds.) M. Korać, S. Golubović and N. Mrđić, Belgrade 2018, 64.

Redžić et al. 2021 – S. Redžić, I. Danković & M. Jovičić, Zaštitna arheološka iskopavanja na lokalitetu Pećine (Viminacijum) tokom 2018. i početkom 2019. godine, in: *Arheologija u Srbiji, projekti Arheološkog instituta u 2018. godini*, (eds.) Selena Vitezović, Milica Radišić and Đurđa Obradović, Beograd 2021, 115–127.

Redžić et al. *in prep.* – S. Redžić, I. Kosanović, M. Jovičić & Lj. Jevtović, *New Evidence for Brick Production at Viminacium*, *in prep*.

Rice 1987 – P. M. Rice, Pottery analysis – a sourcebook, Chicago 1987.

Romeuf, Dumontet 1973 – A. M. Romeuf, M. Dumontet, Four à tuiles gallo–romain aux Martres–d'Artière (P.–de–D.), *Revue archéologique du Centre de la France, Tome 12, fascicule 1–2*, 1973, 87–94.

Rowan 2015 – E. Rowan, Olive Oil Pressing Waste as a Fuel Source in Antiquity, *American Journal of Archaeology, Volume 119, Number 4*, 2015, 465–482.

Schaer 2005 – A. Schaer, Aktuelle Ausgrabungsergebnisse aus den römischen Legionsziegeleien von Hunzenschwil (AG), *Jahresbericht / Gesellschaft Pro Vindonissa*, 2005, 42–51.

Silajdžić 2018 – T. Silajdžić – Tipologija rimskih ciglana s područja Bosne i Hercegovine – prilog poznavanju rimske građevinske djelatnosti u unutrašnjosti provincije Dalmacije, *Acta Illyrica 2*, 2018, 231–266.

Spasić–Đurić 2002 – D. Spasić–Đurić, *Viminacium the Capital of the Roman Province of Upper Moesia*, Požarevac 2002.

Sultov 1985 – B. Sultov, *Ceramic production on the territory of Nicopolis ad Istrum*, Годишник на Софийския университет, Исторически факултет LXXVI, 2, 1983, София, 1985.

Swan 1984 – V. G. Swan, *The Pottery Kilns of Roman Britain*, London 1984.

Țentea, Rațiu 2014 – O. Țentea, A. Rațiu, Figlinae din Dacia, *Angvstia 17–18*, 2014, 217–222.

Валтровић 1884 – М. Валтровић, Откопавања у Костолцу, *Старинар* 1, 3. део, 1884, 89–104. (M. Valtrović, Otkopavanja u Kostolcu, *Starinar* 1, 3. deo, 1884, 89–104.)

Vámos 2010 – P. Vámos, Types of Pottery Kilns in Aquincum, in: *Rei Cretariae Romanae Favtorvm Acta 41*, (ed.) S. Biegert, Bonn 2010, 67–73.

Vámos 2012 – P. Vámos, Some remarks on military pottery in Aquincum, *Acta Archaeologica Academiae Scientiarum Hungaricae 63*, 2012, 395–406.

Vasić 1905 – M. Vasić, Funde in Serbien, *Archäologischen Anzeiger 1905, 2*, 102–109.

Ventura, Cividini 2011 – P. Ventura, T. Cividini, L'impianto produttivo di Ronchis (UD, Italia), in: *Roman ceramics and glass manufactures: production and trade in the Adriatic region: proceedings of the 1st International Archaeological Colloquium, Crikvenica (Croatia), 23–24 October 2008*, (eds.) G. Lipovac Vrkljan, I. Radić Rossi, B. Šiljeg, Crikvenica 2011, 125–132.

Vojvoda, Mrđić 2017 – M. Vojvoda, N. Mrđić, *Coin finds from the Viminacium necropolis of Pećine and their role in funerary ritual*, Belgrade 2017.

Vuković 2010 – S. Vuković, Ostaci životinja sa jugozapadnog dela lokaliteta Pirivoj (Viminacijum), *Arheologija i Prirodne nauke (Archaeology and Science)* 5, 2010, 57–82.

Warry 2006 – P. Warry, *Tegulae: manufacture, typology and use in Roman Britain*. Br. Archaeological Rep. Br. Ser. 417, 2006, 1–167.

Willems 1989 – W. J. H. Willems, Early roman camps on the Kops plateau at Nijmegen (NL), in: *Roman frontier studies 1989, Proceedings of the XVth international congress of roman frontier studies*, (ed.) V. A. Maxfield & M. J. Dobson, Exeter, 210–214.

Wright 2005 – G. R. H. Wright, *Ancient building technology, Volume 2 Materials*, Boston 2005.

Зотовић, Јордовић 1990 – Љ. Зотовић, Ч. Јордовић, Viminacium I*: некропола „Више Гробаља"*, Београд 1990. (Lj. Zotović, Č. Jordović, Viminacium I*: nekropola „Više Grobalja"*, Beograd 1990.)

Љамић-Валовић 1985 – Н. Љамић-Валовић, Античка цигларска пећ у Чукојевцу (Resume: Four a briques antique de Čukojevac), *Зборник радова народноī музеја XV*, 1985, 21–37. (N. Ljamić-Valović, Antička ciglarska peć u Čukojevcu, *Zbornik radova narodnog muzeja XV*, 1985, 21–37.)

Резиме: ЉУБОМИР ЈЕВТОВИЋ, Археолошки институт, Београд

ПРОИЗВОДЊА КЕРАМИЧКОГ ГРАЂЕВИНСКОГ МАТЕРИЈАЛА У АНТИЧКОМ ВИМИНАЦИЈУМУ

Кључне речи. – римска производња керамичких грађевинских материјала, Виминацијум, цигларске пећи, Пећине, Провалије, Ливаде над Ћупријом, Пиривој, Костолац

Технологија производње и употреба печене опеке представља иновацију коју на простор средњег Подунавља уводе Римљани. На археолошком налазишту Виминацијум интензивна производња и употреба овог материјала почиње од краја 1. века н. е. Упркос небројеним налазима опека и бројним производним објектима, овај аспект римске економије античког Виминацијума је слабо познат. Стога, овај рад преставља анализу до сада откривених производних објеката са циљем да се сагледа процес и организација производње на Виминацијуму.

Приликом досадашњих истраживања античког Виминацијума откривено је преко 15 пећи и више објеката за прављење опека на 4 локације. Једна пећ је откривена на локацији Пиривој (радионица 1), међутим, њена околина није истражена, иако постоје индиције да је у питању већа радионица. Највећа концентрација производних објеката је идентификована на локацији Пећине, где су откривене 4 радионице. Највећа и најбоље истражена радионица је Занатски центар (радионица 2), са глиништем, бунаром, халом за сушење, три пећи за печење опека и више мањих пећи за печење другог керамичког материјала. Радионицу 3 чини једна велика пећ, сложеног типа са два ложишна канала, а радионицу 4 две пећи на ободу велике јаме – глиништа. Радионицу 5 чине једна пећ и глиниште. Према западу, две пећи су идентификоване на локацији Ливаде код Ћуприје (радионица 6), у непосредној близини античке виле. У близини ових пећи откривено је више структура за производњу керамичких материјала, међутим, услед ограничености доступних података њих није могуће са сигурношћу везати за пећи. Друга велика производна област откривена је на супротној обали реке Млаве, на локацији Провалије – ТЕКО А. На овој локацији откривено је више од пет правоугаоних пећи за опеке (радионице 6 и 7), међутим, доступни подаци не омогућавају изношење закључака о организацији ових радионица.

Откривени остаци указују да је на Виминацијуму глина ископавана у великим јамама-глиништима, лоцираним у непосредној близини радионица, какве су откривене у склопу радионица 2, 4 и 5, док је вода најчешће црпљена бунарима (радионице 2 и 6?). Порекло песка, као и гориво коришћено за паљење пећи није могуће утврдити. Глинена смеша је обрађивана у јамама, чији је број несразмерно мали, али постоје индиције да је овај процес могао бити вршен и у деловима великих јама-глиништа. Трагови даље обраде су ретки и само се један објекат може везати за овај део производног процеса – хала за сушење опека у склопу радионице 2 (Занатски центар). Из овог разлога претпоставка је да су опеке махом прављене и сушене на отвореном. За печење опека су најчешће коришћене пећи правоугаоног облика са једним ложишним каналом (тип II/b према Cuomo di Caprio 1978/1979), а ређе и веће пећи комплекснијег типа са два ложишна канала (тип II/d). У склопу поменутих радионица нису откривени остаци објеката за смештај људства и складиштење алатки и сировина.

Покретни налази указују да је производња на локацијама Пећине и Провалије – Теко А била под управом VII Клаудијеве легије, а истражени објекти сведоче да је производња високо организована и великог обима. Одликују је веће пећи једноставног облика и једине две пећи сложенијег облика и знатно већег капацитета. С друге стране, доступни подаци нису довољни како би се дефинисао карактер радионица на локацијама Пиривој и Ливаде код Ћуприје. Како ни у једном од ова два случаја нису откривени покретни налази, није могуће утврдити власнике ових радионица.

Досадашња истраживања су показала да је опекарска индустрија у Виминацијуму била развијена и великог обима. На основу доступних података, јасно је да је војска била главни произвођач керамичких грађевинских материјала, међутим, ово не искључује могућност развијене приватне производње, каква је можда откривена на локацијама Пиривој и Ливаде код Ћуприје. Нажалост, сви наведени налази откривени су приликом заштитних археолошких истраживања, што у знатној мери ограничава могућности истраживања. Нова открића и будуће студије, како самих радионица и објеката производње, тако и производа ових радионица, значајно ће допринети разумевању опекарске индустрије, а тиме и живота и развоја античког Виминацијума.

UDC: 904:739.5"652"(497.11)

https://doi.org/10.2298/STA2272155P
Original research article

BOJANA B. PLEMIĆ, Academy of Applied Studies Belgrade
ADAM N. CRNOBRNJA, National Museum of Serbia

A NEW REVIEW OF THE TOPOGRAPHY AND TYPOLOGY OF THE DANUBIAN HORSEMEN LEAD ICONS IN THE SOUTH-EASTERN PART OF PANNONIA INFERIOR

e-mail: bojana.plemic@visokaturisticka.edu.rs

Abstract. – Although the artefacts belonging to the so-called Danubian Horsemen cult have been scientifically examined from various standpoints, the definitive answers to the question of their nature have not yet been reached. One of the key reasons that can be distinguished with regard to this is the lack of insight into the archaeological context since, in comparison to the total number of these artefacts, a small percentage of the samples have been found during archaeological excavations. As the more recent corpora of lead icons points to the conclusion that a significant number originates from the area of the province of Pannonia Inferior, especially its south-eastern part (today`s Srem, Mačva and Posavina), in this paper we have tried to establish at least the widest context they belonged to. Thus, based on the place where they were found, and considering the basic features of the site where it was possible, we investigated whether they belonged to a settlement, necropolis or military setting. Consequently, we concluded that the civil context was dominant in this geographic area in the case of the finds of the so-called Danubian Horseman cult, while we also determined which type of icons were the most prevalent. As the concentration of the lead plaques in this area surpasses the other Danubian provinces, we recognise new possibilities for the interpretation of their function as well as the dating of particular series.

Key words. – lead icon, cult, Danubian Horsemen, Pannonia Inferior, spatial (archaeological) context

---

Archaeological material that belongs to the so-called cult of the Danubian Horsemen has drawn the attention of numerous researchers. However, despite this, the definitive answers concerning its core have not yet been reached. Thus, the sacral essence of the numerous finds, which include stone reliefs, small lead, bronze or copper icons as well as gemstones, is still enigmatic and the very character of the cult has been identified as mystical. In the same time its visual content has generally been attributed to the influence of syncretistic tendencies typical of the period of the Later Roman Empire.[1] Two problems stand out as the key obstacles to the definite conclusions with regard to this material. The first is related to the meagre knowledge of the context of the finds because given the total number of the artefacts, only a small percentage of the samples have been found during systematic archaeological excavations. The museums obtained these samples mainly through purchase, while a significant number of the lead icons can be found in private collections that were formed thanks to the widespread activity of unlicenced investigators and the further distribution of the finds to the European antiquity market.[2] Also, in contrast to the material attributed to other cults and their common votive manifestation, in

[1] Tatcheva 2000, 231–245.

[2] Stuttgart, Munich, Vienna, Paris, Rome and London are the cities where, according to the literature, the lead icons belonging to the so-called Danubian Horsemen cult can be most frequently found on the market, while they originate mostly from Serbia or, more precisely, Srem, Ertl 1996, 3; Gordon 2017, 288, note 34; Szabó 2017, 12, note 1; Malbašić 2021, 223–224. Also, recently, the internet sale of these items has grown significantly.

Manuscript received 17th February 2022, accepted 27th October 2022

this case epigraphic evidence is rare, or appears in scarce words or in the form of mystical formulas,[3] leading the researchers to believe that it was forbidden to pronounce or openly show the names of the depicted deities (*nomina arcana*), which would be another indicator of the mystical nature of this cult.[4]

Bearing in mind the recent archaeological finds related to the so-called Danubian Horsemen cult as well as the new catalogue overviews of the lead icons where their number greatly exceeds that recorded in D. Tudor's corpus, in this paper we will try to consider their spatial context as well as their typological prevalence in the area of the south-eastern part of the province of Pannonia Inferior.[5] Also, examining the data with regard to the authentic context of the site, where particular samples were found, along with recently published epigraphic evidence, we will examine a few important guidelines for the study of the function of these lead icons. Finally, in the light of the obtained data, our goal is also to reconsider the problem of dating certain series of these plaques and point out the possibility of their chronological placement in the last decades of the 3rd century.

Main interpretations of the so-called Danubian Horsemen cult (The problem of the cult name)

As on this occasion we will not analyse the nature of this cult in detail,[6] we will briefly present the main directions regarding the interpretation of its visual repertoire in order to ensure a better comprehension of the main discussion. Scientific interest in the finds belonging to this cult has existed since the second half of the 19th century,[7] so a few key interpretations regarding the central deities may be distinguished, which, in turn, have conditioned the subsequent suggestions concerning the name of the cult.[8] The earliest opinions favoured the horsemen as main figures, identifying them as Cabiri or Dioscuri, while their imagery was linked to the Thracian Rider.[9] After the 1970s, it was generally accepted that they could not be identified as the above-mentioned deities, but that it was an autochthonous visual phenomenon typical of the Danubian provinces of the Roman Empire (*Pannonia Superior, Pannonia Inferior, Moesia Superior, Moesia Inferior, Dacia and Dalmatia*), which is why the cult was given the name that has prevailed to the present.[10]

The opinions that pointed out the possibility that a goddess may be the main deity appeared early, given that she was always present in the central register of the artefacts together with one or two horsemen. Therefore, the researchers identified her as the major goddess of the *Terra (Magna) Mater* type, a syncretistic deity who assimilates the influences of Epona, Helen and Demeter, i.e., the wide syncretism typical of Artemis-Anahita-Cybela-Rhea-Venus-Diana of Ephesus or perhaps the influence of the goddess *Dea Syria* (Atargatis).[11] The turning point in the cult's conceptualisation was the research by Lj. Zotović, who pointed out its visual consistency and dominance over the horsemen, identifying her as a deity similar to Luna, suggesting that the name could be changed into the

---

[3] D. Tudor states that there are only eight known samples with some form of inscription. It is believed that the two of the inscriptions, one on a stone relief and the other on a gemstone, represent only the names of the artists who produced them. Apart from the engraving of the word λέων on one gemstone, which may represent a certain degree of initiation in the cult hierarchy, it was impossible to decipher the meaning of the rest of the inscriptions, Tudor 1976, 72–73. However, recently, a few lead icons with inscriptions have been published, which opened up new possibilities for the interpretation of the cult and its central figures and, consequently, the function of these artefacts, Clauss 2006; Szabó 2017, 27–54; Malbašić 2021, 237, 282, sl. 47–48.

[4] Tudor 1976, 74.

[5] The above-mentioned region has been singled out as the dominant area of their prevalence for a long time, Ochsenschlager 1971; Поповић 1986; Поповић 1988; Црнобрња 2007; Црнобрња, Племић 2015; Ружић, Лазић 2016; Malbašić 2021, 224.

[6] We note that certain authors held that this was not a cult as an organised religious and ritual practice, primarily due to the lack of votive inscriptions as well as archaeological evidence that would indicate the existence of shrines, so they ventured an opinion that these were rather items that functioned as amulets, Cumont 1938; Gigliolli 1951; Clauss 2006. M. Tatcheva also denied this was a cult as there was no standardised iconography, while she interpreted the visual content of the lead icons as an expression of the heterogeneous structure of the Roman army, whose members she saw as the holders of such convictions, Tatcheva 2000, 244–245.

[7] See the overview of older literature by Tudor 1976, 23 and further.

[8] Though we have given only a brief overview of the opinions regarding the identification of the central deities of the cult, we must point out that the iconographic complexity of these findings exceeds the problem of the main deity's explanation. The richness of the motifs represented, often given through several registers, indicates that this is a complex syncretism of various influences such as those of Mithraism (through the so-called *Principia vitae* symbols as the snake, the lion or the cock interpreted as elements like fire, water, etc.), then the Dionysiac reliefs (through motives like an egg, snakes etc.), but also from other mystic cults like the Metroac cult, because of the scene of criobolium, Tudor 1976, 208–231; Malbašić 2021, 263–282.

[9] Tudor 1976, 137–142; Szabo 2017, 21, no. 12, 13.

[10] Iskra-Janošić 1966; Ochsenschlager 1971; Tudor 1976.

[11] Tudor 1976, 104–109.

cult of the Lunar Goddess.[12] However, in more recent literature she is linked again to Epona[13] or Hecate,[14] while some authors believe that Sol in quadriga, present in the uppermost zone of particular types of lead icons, is in fact the central deity.[15]

Recently, an effort has been made to reconcile the views about the dominance of Luna as the major goddess and the god Sol as a major deity, through the parallel between the divine couple *Domnus/Dominus* and *Domna/Domina.* Namely, this theory was inspired by a find originating from the field survey of the site of Lébény-Barátföldpuszta (Győr-Moson-Sopron County) in Hungary, or more precisely from the territory of *Quadrata* in Pannonia Superior. There, a lead icon was found that was divided into two zones with a legible inscription DOMINO in the upper register. To date, the plaque is unique in the rich repertoire of this cult.[16] It was this icon that A. Szabó linked to the above-mentioned divine couple whose votive inscriptions were recognised in a great number of artefacts from the same geographical area as the so-called Danubian Horsemen cult, holding the view that this dyad had originated from the period predating the Roman Empire.[17] Identifying as many as 17 sanctuaries of their cult, which were also the places where the artefacts depicting the Danubian Horsemen were found in the immediate surroundings, this author supposed that stone reliefs and lead icons could represent a reduced version of the cult imagery from the temple of the divine couple *Domnus/Dominus* and *Domna/Domina,* suggesting the new name of the cult.[18]

Topography and typology of lead icons in the south-eastern part of Pannonia Inferior

As to the number of lead icons belonging to the so-called Danubian Horsemen cult, the region of the Roman province of Pannonia Inferior had been already singled out as dominant in the first synthetic corpus of these artefacts by D. Tudor,[19] which was confirmed by the ensuing published samples, including those in the catalogues by R. F. Ertl and V. Malbašić.[20] As an exceptionally high concentration of the finds can be detected in the area of today's Srem,[21] Mačva and Posavina near Obrenovac i.e. the south-eastern part of Pannonia Inferior,[22] we used the previously applied methodology for the examination of the spatial context of the finds,[23] as we had a much larger sample at our disposal. Therefore, we could gain a deeper insight into the topography of the finds in this area, along with knowledge related to a wider context they belonged to, as well as the typological domination of certain kinds of icons in this region.

We have already mentioned that one of the significant problems related to the examination of Danubian Horsemen icons is, in most cases, linked to the lack of information about the archaeological context in which they were found. Despite individual cases that have recently emerged as exceptions to the rule,[24] this tendency has been present up to now, when Danubian Horsemen icons are mostly accidental finds during land cultivation on Roman sites or are objects of illicit trafficking, which greatly impedes the understanding of the way in which this cult had been practiced. As for most of the icons found in the area of south-eastern part of *Pannonia Inferior* we can define the place of the find, through an observation of the basic characteristics of these sites we have tried to establish at least the widest context they belonged to. Since the data available to us mostly emerged from field prospection results on other archaeological traces and certain zones within the sites, it was possible to determine only a few basic types of sites: settlements that entail urban zones (*Sirmium, Bassianae, Spodent*), *villae rusticae*,

---

[12] Zotović 1998.

[13] Ertl 1996; Plemić 2013.

[14] Бенџаревић 2011; Malbašić 2021, 242–248.

[15] Tóth 2003, 467–480.

[16] Szabo 2017, 27–54, fig. 1–3; Malbašić 2021, 53, Tip A18, Pl. VI.

[17] It should be noted that in the recent literature, there has been a discussion about which deities the epithets Dominus/Domna actually refer to, as well as about the relevance of specific confirmations of the connection between them and the cult of the Danubian Horsemen, Hainzmann 2017; Kremer 2019; Matei-Popescu 2021.

[18] Szabó 2017, 21, 98, 101–127.

[19] Of the total of 232 registered artefacts in the corpus of D. Tudor, 92 finds were made of lead, among which 44 items originate from Pannonia Inferior, Tudor 1976, 60.

[20] Ertl 1996, 27–130; Malbašić 2021, 43–139.

[21] There are some suppositions that the largest number of lead icons originate from the region of Pannonia Inferior i.e., the area of Srem, Malbašić 2021, 224–225. Also, in the case of the private collection of lead icons owned by professor Manfred Clauss from Frankfurt, comprising 800 samples (mainly unpublished), the majority is believed to originate from Serbia, Gordon 2017, 288, note 34; Szabó 2017, 12.

[22] About the belonging of the area south of the Sava river to the province of Pannonia Inferior, see: Crnobrnja 2011, 384–385; Црнобрња 2020, 16–25.

[23] Црнобрња, Племић 2015, 179–182.

[24] Paridaens 2010; Szabó 2017, 111–126; Bondoc 2018; Nemeti, Cristea 2020.

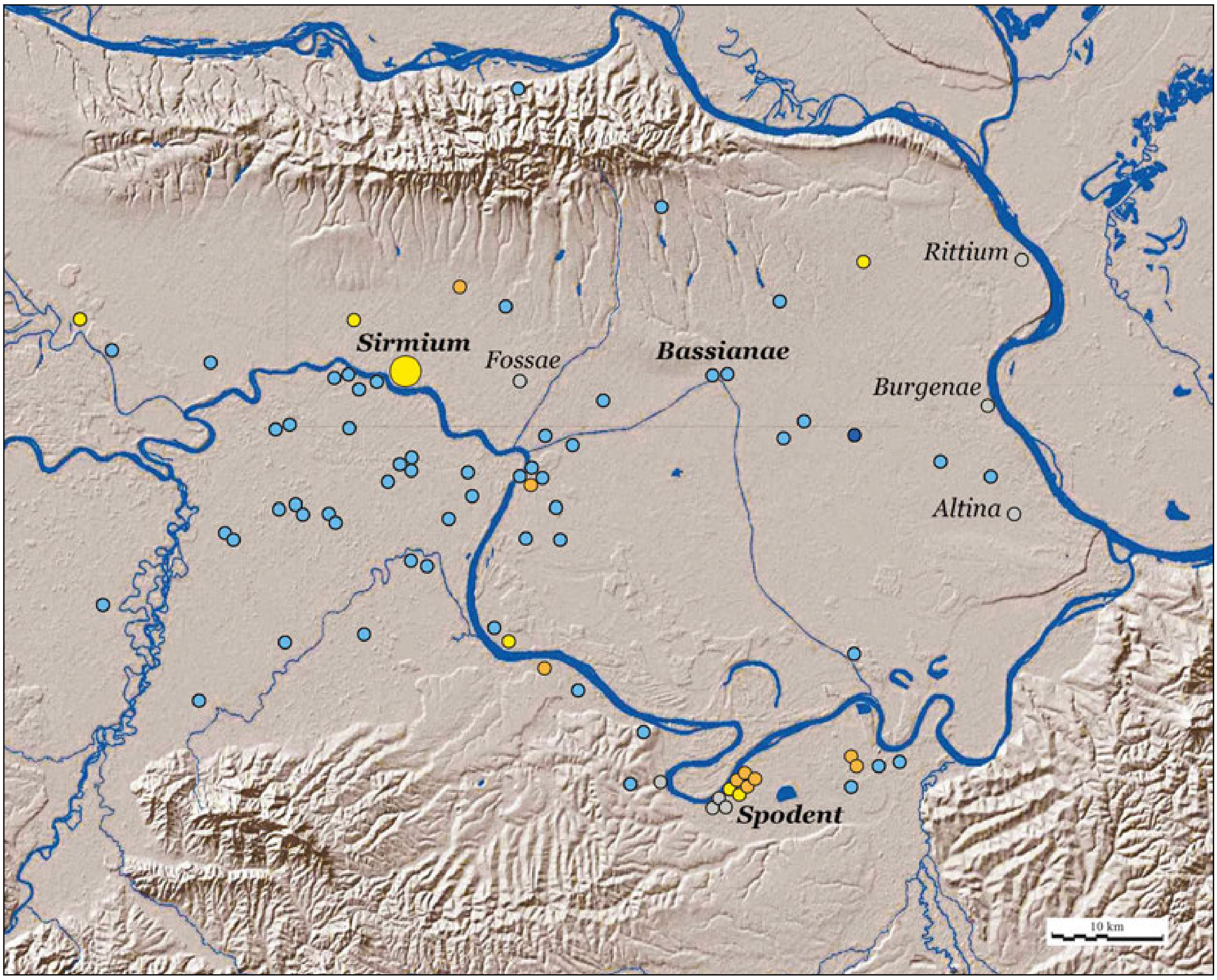


Fig. 1. Topography of lead icons in the south-eastern part of the province of Pannonia Inferior

Сл.1. Топографија налаза оловних икона у југоисточном делу провинције Доње Паноније

smaller rural estates and isolated objects; secondly, necropoles (either certain grave finds or supposed zones of necropoles in certain sites) and, finally, a military context (the sites of military forts). In this way, in our previous paper, we had considered 85 lead icons from this area, obtaining an insight that the majority of these originated from settlements while a smaller percentage was found in graves or necropole zones and the smallest number can be related to the areas where the Roman army was stationed.[25] After a comparison with the contexts of the finds stated by Tudor,[26] we perceived that our conclusions greatly differ, as our analyses showed that the civil context in its widest sense is clearly dominant in the case of these finds.[27]

On this occasion, the previously analysed samples are complemented by those that have been published in the scientific periodicals in the meantime,[28] as well as those from the collection of V. Malbašić where the site of the finds is in the south-eastern part of Pannonia

[25] In the case of 26 samples, not even the widest context of the finds is known. We are aware of the approximate surroundings for 15 items without the data about the exact site, while we know that 11 of them originate from the area of Mačva, Црнобрња, Племић 2015, 180.

[26] In his corpus, Tudor emphasised that the circumstances of the findings are known in the case of only 42 out of 232 registered samples: 10 – military camps, 6 – domestic chapels (*sacella)*, 2 – funeral context, 7 – temples, 1 – *mithraeum*, 1 – *aedes Augustalium*, 2 – *villa suburbana*, 13 – undefined in the Roman settlements, Tudor 1976, 55–58.

[27] Црнобрња, Племић 2015, 180–181, сл. 4.

[28] Лазић, Ружић 2016; Domiter 2016.

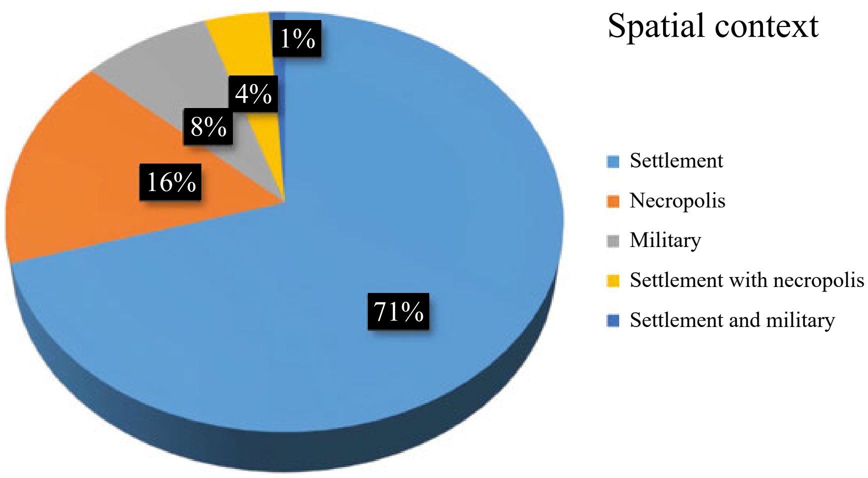


Fig. 2. Lead icons' spatial context in the south-eastern part of the province of Pannonia Inferior

Сл. 2. Просторни контекст налаза оловних икона у југо-источном делу провинције Доње Паноније

Inferior.[29] We note that the lead icons from the catalogue of R. F. Ertl were mostly not included in our overview of the wider context of the finds,[30] bearing in mind that the majority of them are claimed to have been found near Sremska Mitrovica or its surroundings with a note "presumably" or "probably", which must be taken with caution because Ertl's samples mostly come from the antiquity market. However, regarding the typological prevalence, we considered the finds from this collection as a possible contribution to the overall statistics. In addition, instead of the previously used typology by I. Iskra-Janošić, we used the newer typology of V. Malbašić, which sprang from those of R. F. Ertl, along with the successful consolidation of the types by the three above-mentioned authors,[31] as it appeared simple to use because it encompasses the finds in all known corpora.

Through the analysis of the topography of lead icons in the area of the south-eastern part of the province of Pannonia Inferior (Fig. 1), it was possible to determine the widest context of the finds i.e., the type of site for 98 out of 306 items that we took into account in this paper (Tab. 1). Among these, 69 items belong to settlements, followed by 16 from the zones of necropoles, then a military context with 8 samples, while 4 artefacts were found in the sites identified as settlements with necropolis and one item was found in a settlement with a military context (Fig. 2). Thus, in this area, at least judging from the available data, the absolute dominance of a civilian context was proved regarding the finds of the lead plaques belonging to the so-called Danubian Horsemen cult, which is in line with our previously stated observations, and significantly opposed to Tudor's statistics, where a military context prevailed.[32]

With regard to the typological prevalence of the lead icons in the region of south-eastern Pannonia Inferior (Tab. 2), the presence of 32 types was registered. It is significant to emphasise that of the total of 670 published icons in all three known corpora[33] along with several dozen published in other literature,[34] 306 samples found in the above-mentioned region make up

[29] Of 304 new samples published by V. Malbašić in his new catalogue, for as many as 202 items there is an exact or approximate record of the site of the finding, which points at this area, Malbašić 2021, 43–139, 224.

[30] Except in rare cases where *Sirmium* i.e., Sremska Mitrovica is stated as the exact place where the item was found.

[31] Namely, R. F. Ertl`s typology, which consisted of 11 types marked by the letters A to K, which, together with subtypes, included 56 different kinds of votive plates, was completed by V. Malbašić in line with the new material that was available, so that there were as many as 83 types that represent the samples of casts from different moulds, Malbašić 2021, 17–20, tab. 1.

[32] See footnote 24 and 25.

[33] Tudor 1976; Ertl 1996; Malbašić 2021, 224.

[34] According to our knowledge, more than 20 lead plaques that were not found in the above-mentioned area or cannot be undoubtedly ascribed to it were published in the few preceding decades, Lane 1994; Јованова 1995; Јованова 1999; Treister, Strokova, Zubar 2004; Pavlović 2005; Љубенова 2008; Paridaens 2010; Ivanov 2011; Ertl 2014; Domiter 2016, cat. 2; Szabo 2017; Bondoc 2018; Nemeti, Cristea 2020; Стојановић, Ђурђевић 2021, сл. 8–9.





Fig. 3. Danubian Horsemen lead icon of type F01 (after Ertl 1996, Taf. LXVII, no. 69)
Fig. 4. Danubian Horsemen lead plaque of type B01 (after Ertl 1996, Taf. XXII, no. 11)

Сл. 3. Оловна икона кулӣа ӣодунавских коњаника – ӣиӣ F01 (ӣрема Ertl 1996, Taf. LXVII, no. 69)
Сл. 4. Оловна икона кулӣа ӣодунавских коњаника – ӣиӣ B01 (ӣрема Ertl 1996, Taf. XXII, no. 11)





Fig. 5. Danubian Horsemen lead plaque of type B02 (after Ertl 1996, Taf. XXXIII, no. 29)
Fig. 6. Danubian Horsemen lead plaque of type B03 (after Ertl 1996, Taf. XXXV, no. 21)

Сл. 5. Оловна икона кулӣа ӣодунавских коњаника – ӣиӣ B02 (ӣрема Ertl 1996, Taf. XXXIII, no. 29)
Сл. 6. Оловна икона кулӣа ӣодунавских коњаника – ӣиӣ B03 (ӣрема Ertl 1996, Taf. XXXV, no. 21)

approximately 45% of all known finds, while together with Ertl's catalogue that are presumably linked to the area of Sremska Mitrovica and its surroundings, this would be a place of origin for almost 80% of the entire known repertoire of lead icons belonging to the so-called Danubian Horsemen cult. Regarding typological prevalence, it is noticeable that in the considered region the type F01 is the most dominant, comprising 54 artefacts, or even as many as 115 items if those from Ertl's collection are added. Directly after this type follows B03 with 47 items, which makes up a total of 91 samples together with those recorded by Ertl, while it can be said that the plates of type B with three subvariants are the most numerous in this area, with 106, or rather 189, known samples if we include those in Ertl's collection. Additionally, the number of those belonging to type H02 also stands out, including 38 items, or rather 81, if we add those from R. F. Ertl's catalogue.

Speaking of specific features of the dominant types, we will mention that these types of icons noticeably differ. Thus, type F01 represents a sample of rectangular form with a pediment and acroterions, with a rather schematic representation (Fig. 3). What is prominent in its iconography is a representation of a big fish surrounded by stars in the uppermost zone, while in the lower space there are three horizontal registers with mostly standard representations.[35] In contrast, the icons that belong to type B are characterised by a better organisation of registers and better quality of the representation of figures with accentuated details. These are plaques of a rectangular shape with semi-circular *aedicula* propped up by two smooth columns and an arch decorated with an oval ornament in subvariants B01 and B02, while B03 has twisted columns (Figs. 4–6). The special feature of this type is the dominant representation of Sol in quadriga in the uppermost register, while in contrast to the previous type, where the goddess is represented standing with her arms wide apart facing the horsemen, here she is shown lifting the skirts of her robe to make a sort of pouch with offerings.[36] Finally, the third type that stands out due to the number of samples is H02, circular in shape and with a somewhat worse spatial organisation, with an ornament along the outer frame that partially corresponds to that in the arch of type B (Fig. 7).[37] In view of the fact that all the above-mentioned types differ in terms of style, iconography and quality of production, it is possible that, apart from the one supposed to have been located in *Sirmium*,[38] there were more workshops specialised in their production. The other possible explanation for the heterogeneity of the lead plates may be the chronological gap in the production date and the change in the evolution of the cult.



Fig. 7. Danubian Horsemen lead plaque of type H02 (after Ertl 1996, Taf. CX, no. 55)

Сл. 7. Оловна икона кулūа ūодунавских коњаника – ūиū H02 (ūрема Ertl 1996, Taf. CX, no. 55)

Function and dating of the lead icons in light of recent discoveries

Since our new analysis of spatial context of the finds of the lead icons belonging to the so-called Danubian Horsemen cult in the region of the south-eastern part of *Pannonia Inferior* showed that these were predominantly found in a civilian context, on this occasion we can confirm our previous observation that the cult was widespread not only close to military and urban centres, but also in rural areas, so that it may have been embraced by the more general population.[39] In line with this are the more recent findings during archaeological

[35] Malbašić 2021, 84–85.
[36] Malbašić 2021, 53–54, 60, 63–64.
[37] Malbašić 2021, 117.
[38] Поповић 1986, 115, 117; Поповић 1988, 115.
[39] Црнобрња, Племић 2015, 183.

excavations.[40] Thus, during the salvage excavations of a Roman *villa rustica* in Đelilovac near Travnik, in the north-eastern part of Dalmatia, one bronze plate was found,[41] while we consider especially interesting the finding of a plaque of a silver-plated copper alloy from a Gallo-Roman *villa rustica* discovered in Merbes-le-Château in Gallia Belgica.[42] This plaque was found in a casket with two silver spoons, a purse of 122 silver *antoninianii*, a perfume phial and four worn *sestertii*.[43] In addition, on the site south of the village of Ciupercenii Vechi in Romania, one lead icon was found together with a considerable number of artefacts that point to agricultural activities i.e., the existence of a smaller Roman settlement,[44] while the military context is implied by two marble reliefs from the auxiliary fort at Pojejena (*Dacia Superior*).[45] Also, the urban context of *Sopianae* (Pécs, Hungary) is the place from where three different lead icons originate, as well as one marble relief, all of them found inside the north-eastern zone of a Roman settlement, where it would probably be possible to look for a sanctuary dedicated to the deities of this cult.[46] Likewise, during archaeological excavations in the centre of today's Sofia (*Serdica*), a lead plaque was found below the level of the street pavement of a narrow decumanus in the northern part of the site,[47] and one more plaque originates from a Roman settlement in the present-day Arbanas quarter in the Bulgarian town of Radomir.[48]

In accordance with the above-mentioned, bearing in mind the large number of these plates in the region of south-eastern *Pannonia Inferior,* a question arises whether we can suppose there was a temple, or even several of them. As a potential site of such sanctuary, Sirmium, and its immediate surroundings, may be the most likely, due to the high concentration of finds.[49] V. Malbašić emphasised that it could have been located near the village of Vojka (the municipality of Stara Pazova), close to Ruma, or in the area of Hrtkovci and its surroundings.[50] Since the production of lead icons was probably inexpensive, they may have been a kind of religious souvenir distributed from the temples, so they may not have represented votive gifts at all.[51] Also, some details of iconography on particular samples lead to the conclusion that there may have been an organised cult and practice carried out in temples. Thus, on type D07, which is represented by one sample in Mačva and three in Macedonia,[52] in the lowest zone there is a double shrine in front of each of which there are two people, while the motif of a temple was also recorded in the third zone of the plate from the village of Dunăreni, (Aliman, Constanţa County, Romania).[53] Finally, one fragment of a marble relief from *Poetovio,* where Sol's representation corresponds mostly to that from the uppermost zone of lead icons of type B, prompted I. Toth to suggest that, in fact, this may have been the main cult image in the sanctuary of the so-called Danubian Horsemen cult.[54]

If we accept the proposition that stone reliefs were placed in sanctuaries as votive gifts, and that lead plaques served as movable personal property of their owners, we must wonder what the essence of their function was. Today, the prevailing opinion is that lead icons had a prophylactic character and that they were carried as amulets in small wooden frames or leather bags.[55] This is confirmed by a fragment of an icon from Ušće that shows a carefully cut part of a plate with a small hole in its top, which led us to believe that the owner wore it on a string around their neck as a talisman.[56] It is possible that the protective features were ascribed to whole plaques with a hole, such as samples from Šuljam and Hrtkovci[57], which were fixed in the

---

40 We emphasise that this primarily applies to the investigations in *villae rusticae*, so it does not necessarily entail the widespread presence of the cult among rural population, as these were normally managed by *domestici* i.e., wealthy landowners.

41 Vajzović 2015.

42 Paridaens 2010.

43 Paridaens 2010, 412–413, fig.3–4.

44 Bondoc 2018, 229.

45 Nemeti, Cristea 2020.

46 Szabó 2017, 111–126, fig. 4.

47 Ivanov 2011.

48 Любенова 2008.

49 The hypothesis about the existence of a sanctuary in Sirmium was proposed by A. Szabo, connecting it with a votive relief with the dedication DOMINO from that town, Szabo 2017, 107, 124.

50 Malbašić 2021, 225.

51 Szabo 2017, 128; In support of this hypothesis, V. Malbašić concludes, after careful examination of the features of a large corpus of the lead icons, that these were made in a limited number of stone moulds and also that it can be supposed that a smaller number of icons were made in clay moulds, after the destruction of stone ones, Malbašić 2021, 231–234.

52 Јованова 1995; 1999; Malbašić 2021, 80–82, kat. D07 001, D07 002, D07 003, D07 004.

53 Iconomu, Chiriac 2004, 83, fig. 1.

54 Due to the supposed dimensions of this relief, as well as its small thickness, it is held that it had been attached to a firm base, Toth 2003, 476–477 Abb. 5–6; Szabo 2017, 109–110.

55 Tudor 1976, 74–75

56 Црнобрња, Племић 2015, 176, Таб. II, 5.

57 Table I, no. 149, 183.





Fig. 8. Relief of Epona from Köngen (after Boucher 1990, 625, no. 192)
Fig. 9. Statuette of Epona from Alesia, Gaul (after Boucher 1990, 621, no. 70)

Сл. 8. Рељеф са представом Епоне из Кенгена (према Boucher 1990, 625, no. 192)
Сл. 9. Епонина статуета из Алисија, Галија (према Boucher 1990, 621, no. 70)

homes of the worshippers of the cult. The properties of amulets are also ascribed to rare finds of type D with the inscription COMES TIBI SO(M), i.e. COMES TIBI, interpreted as "I am your follower".[58] More recent views point to the possibility that the lead icons may have been a part of magic rituals that invoked the deity, which is attested by the defects showing physical damage on some plaques.[59] However, the impressively high concentration of finds in the area we considered, again raises the above-mentioned question concerning the reason for the production of such extensive series? One of the attempts to explain this may point that a possible reason for their moulding was to mark a special event,[60] which may inspire further consideration of the problem of the dating of particular series.

As type B represents the most dominant type in the area we took into consideration, we mainly focused on this type. Previous literature is rather abundant regarding the topic of its dating, with the prevailing decision to place it chronologically into the first half of the 3rd century.[61] The view is mostly based on the goddess's coiffure of the so-called *melonen* style, which was frequent among the Syrian empresses (Julia Domna, Julia Maesa and Julia Mamaea). Hence, Tudor dated the icons with smooth pillars, i.e., the types B01 and B02, to the first decades of the 3rd century, i.e., the time of the Severan dynasty, while he believed the type B03, where twisted columns appear, could be dated in the period between 240 and 270 AD, given these were of poorer quality fabrication.[62] In favour of such a dating was suggested an analogy with the coin

[58] This is an interpretation by M. Clauss, while V. Malbašić suggests "(I am) your follower Sun" (Comes tibi So(l) (sum)), Clauss 2006, 219–220, 222, 223; Malbašić 2021, 76–78, 237, kat. D01 001, D01 002, D01 003, D02 001, D03 001.

[59] Malbašić 2021, 225, 240–242.

[60] Црнобрња 2007, 284.

[61] There were efforts to date this type to an earlier period. Namely, one such icon was found in the Gallo-Roman *villa rustica* near Magny le Port (dept. Haute-Saône in France), which is stated to have been built at the beginning of the 2nd century, while fragments of the ceramics imply that its destruction happened between 170 and 190 AD, so the lead icon is claimed to have been made in the last decades of the 2nd century, Fromols 1958, 259, note 7. However, the author did not have a direct insight into investigations, but had an opportunity to have a look at a sketchbook and notes from the excavations done in 1860, so we take this data with caution.

[62] Tudor 1976, 82; Поповић 1988, 115.

of Elagabalus (218–222), on the reverse of which there is a representation of Sol in quadriga.[63] However, we would like to note that the hairstyle depicted on the lead icons may not necessarily be a reliable indicator that these should be dated to the first half of the 3rd century. Namely, one of the authors of this paper had previously pointed to the possibility that the iconography of the Danubuian goddess may be influenced by the visual representation of Epona, whose artefacts are known to be present in the area where the so-called Danubian Horsemen cult was widespread.[64] This supposition was primarily induced from the visual parallel between their representations, such as the detail of the movement of the goddess reaching out her hand to touch the horses' muzzle, or lifting the skirts of her robe to make a sort of pouch with offerings (fruit or bread), which is typical of Epona, as well as of Celtic fertility deities in general.[65] As the above-mentioned goddess often wears a *melonen* hairstyle (Fig. 8–9), which prompts the dating of some artefacts of her cult to the period of the Severan dynasty[66], it would seem logical to move the dating of the Danubian Horsemen lead icons of type B to a somewhat later period.

In line with the all above-mentioned, we are more prone to support the view of the authors who, bearing in mind the typical representation of Sol in quadriga, dated the samples of lead icons of type B to the period after 270 AD.[67] As one of the main arguments for this we can take the ruling ideology of Emperor Aurelian i.e., his protection of the cult of Sol,[68] which was later continued by Emperor Probus, which is excellently illustrated on his coins.[69] Also, in the area we took into consideration, a ceramic medallion with a representation of Sol was found, corresponding almost identically to the one found on lead plates type B. The medallion was found in Šašinci, on the site of a *villa rustica* and, based on the supposed conditions of the find, it is dated to the end of 3rd and the beginning of 4th century.[70] That is why it is possible that the representation of Sol on lead icons of the so-called Danubian Horsemen cult, previously in the form of a bust as a counterpart to the representation of Luna in the uppermost zone of the icons, in fact reflects the evolution of this deity in the direction of *Sol Invictus,* which characterises the official imperial cult.[71] Also, we believe that a recommended clue for further investigation should be the view of V. Malbašić on the meaning of *Sol Invictus,* especially on the icons where Sol appears doubled, through the image of the bust in profile and a deity with a seven-pointed crown in quadriga. This author holds the opinion that this is not a case of an identical representation of two solar symbols, but that *Sol Invictus* is, in fact, the so-called Hypercosmic Sun, as interpreted by Neoplatonists, while a bust of Sol with Luna represents the astronomic phenomenon.[72] This interpretation is not opposed to the ideology of Roman emperors from the last decades of the 3rd century, especially that of Emperor Aurelian, who did not prohibit other beliefs in the Empire but emphasised the absolute dominance of Sol over them, analogously to his political endeavours to restore imperial authority in all the parts of the Empire, which had been seriously shattered through wars and domestic conflicts. Therefore, we should not dismiss the possibility that an important event during his reign, such as the inauguration of Sol's temple in Rome and the establishment of a new order of its priests in 274,[73] may have influenced the production of the series of lead icons of type B. Since solar ideology continued to be present in the decades after Aurelian's reign, these series must have been present for a longer period,[74] which may be an explanation for their great number in the same period of time.

---

63 Domiter 2016, 128–129, fig. 2.

64 Plemić 2013.

65 In our previous paper we specified the possible elements of the overlap of these two cults, i.e., in which areas such iconographic influences may have appeared, Plemić 2013, 65–69. In addition, in this paper we would like to mention a more recent finding of a ceramic pot with an applied medallion, from Viminacium, where we can notice a typical representation of Epona on a throne flanked by horses where, in terms of her robe, we can find lots of similarities to those worn by the goddess on lead icons of type B, Jovičić, Bogdanović 2017, 36–37, fig. 3–4.

66 Euskirchen 1993, 623–624, note 115–117.

67 Hampel 1903, 350; Toth 2003; Malbašić 2021, 239.

68 It is held that in the times of Aurelian Sol became the supreme deity, while his cult dominated as an official imperial ideology until the final affirmation of Christianity, Halsberghe 1972, 38–110; Schumacher 1997, 250; Hijmans 2009, 8–30.

69 Јовановић 1998, 21–22.

70 Брукнер 1997, 98–99; Јовановић 2007, 20–21.

71 Halsberghe 1972, 114, 118.

72 Malbašić 2021, 259–260, 264.

73 Hijmans 2009, 618.

74 Evidence that the cult of the Danubian Horsemen was present during the 4th century is provided by artefacts that originate from a preserved archaeological context. Regarding that, an icon of the F01 type was found in Sucidava together with bronze coins from the period of Aurelian to Constantine the Great (Tudor 1976, 82). Likewise, an icon of the G02 type, from the village of Radenković in Serbia, as well as one lead icon of the type E03 from Serdica, were also found together with the coins from the 4th century (Tab. I, no. 100; Ivanov 2011, 125).

Conclusion

Analysing the topographical prevalence, i.e., taking into the consideration the wide context of the lead icons of the so-called Danubian Horsemen cult found in the area of south-eastern part of *Pannonia Inferior*, we intended to point out the importance of the region for the examination of this cult, thus joining the authors who believe that the centre of the production of these plaques was located there,[75] as well as that the final comprehension of their sacral content must necessarily be sought in this area.[76] In support of this, an exceptionally high concentration of finds has been recorded there, not only attesting to the higher number of such artefacts compared to the other regions where the cult was prevalent, but also indicating that the centre of the cult may have been located there, though at the present moment there is no evidence of the material remains of the sanctuary. Since we showed, in those cases where it was possible, that the majority of finds originates from a civilian context (urban zones, smaller settlements, *villae rusticae*, rural settlements and settlements with necropoles), our findings fundamentally differ from the original statistics provided by D. Tudor, where a military context was considered prevalent. Although we should not completely neglect the opinion that views the members of the army as the main believers in this cult, and which sees the heterogeneous structure of the Roman military units as a reason for the prominent syncretism in the iconography of lead icons,[77] we believe that the future study of the issues of the Danubian Horsemen cult must necessarily take into account the data we have provided here. In accordance with this, it is important to pay attention to the possible reasons for such a mass production of the icons, the character of the messages they conveyed and the question regarding who they were designated for, i.e., to what extent the cult could have been accepted by the general population.

We hope that we have provided feasible guidelines that may contribute to further research, and that new finds will finally clarify the contours of this mysterious cult, which was undoubtedly one of the most dominant religious beliefs in the region we considered during the late Roman epoch.

[75] Поповић 1986.
[76] Јовановић 2007, 41.
[77] Tatcheva 2000, 231–245.

BIBLIOGRAPHY:

Бенџаревић 2011 – Т. Бенџаревић, Прилог идентификацији богиње на споменицима култа подунавских коњаника. *Гласник Српског археолошког друштва* 27, 2011, 83–104. (T. Bendžarević, Prilog identifikaciji boginje na spomenicima kulta podunavskih konjanika. *Glasnik Srpskog arheološkog društva* 27, 2011, 83–104).

Bondoc 2018 – D. Bondoc, The representation of Danubian Horsemen from Cuipercenii Vechi, Dolj County, in: *La Dacie et L'Empire Romain*, *Mélanges d'épigraphie et d'archéologie offerts à Constantin C. Petolescu,* M. Popescu, I. Achim, F. Matei-Popescu (éds)*,* Bucarest 2018, 229–257.

Boucher 1990 – S. Boucher, Epona (Addenda), in: *Lexicon Iconographicum Mythologiae Classicae* V/1–2, L. Kahil (ed.), Zürich – München 1990, 985–998, 619–628.

Brukner 1976 – O. Brukner, Vicus i villa rustica u pograničnoj oblasti panonskog limesa između *Cusum*-a i *Bononia*-e. *Građa za proučavanje spomenika kulture Vojvodine* 6–7, 1975–1976, 19–44.

Брукнер 1995 – О. Брукнер, Римска насеља и виле рустике, у: *Археолошка истраживања дуж аутопута кроз Срем*, ур. З. Вапа, Нови Сад 1995, 137–175 (O. Brukner, Rimska naselja i vile rustike, u: *Arheološka istraživanja duž autoputa Srem*, ur. Z. Vapa, Novi Sad 1995, 137–175).

Брукнер 1997 – О. Брукнер, Керамички медаљони – празнични колачи у римском керамичком занатству. *Рад Музеја Војводине* 39, 1997, 97–102. (O. Brukner, Keramički medaljoni – praznični kolači u rimskom keramičkom zanatstvu. *Rad Muzeja Vojvodine* 39, 1997, 97–102).

Clauss 2006 – M. Clauss, Comes tibi so(m) – Geheimnisvolle Amulette. *Klio* 88/1, 2006, 216–232.

Црнобрња 2007 – А. Црнобрња, Две иконе подунавских коњаника из Уроваца. *Гласник Српског археолошког друштва* 23, 2007, 279–287. (A. Crnobrnja, Dve ikone podunavskih konjanika iz Urovaca. *Glasnik Srpskog arheološkog društva* 23, 2007, 279–287).

Crnobrnja 2011 – A. Crnobrnja, Roman Settlement at Ušće near Obrenovac – municipium Spodent(?). *Zbornik Narodnog muzeja Beograd* XX–1, 373–388.

Црнобрња 2020 – А. Црнобрња, *Југоисточни део Доње Паноније: топографија и просторна организација од I до IV века.* Београд 2020. (A. Crnobrnja, *The South Eastern Part of Pannonia Inferior: Topography and Spatial Organisation from the 1st to 4th Century*. Belgrade 2020)

Црнобрња, Племић 2013 – А. Црнобрња, Б. Племић, Жишци у обредима култа подунавских коњаника, у: *Античке светиљке – Хронологија, типологија, орнаментика (Акта стручног скупа одржаног у Музеју града Београда, октобар 2011)*, ур. С. Крунић, И. Поповић, Т. Цвјетићанин, Београд 2013, 89–100. (A. Crnobrnja, B. Plemić, Žišci u obredima kulta podunavskih konjanika, u: *Antičke svetiljke – Hronologija, tipologija, ornamentika (Akta stručnog skupa održanog u Muzeju grada Beograda, oktobar 2011*), ur. S. Krunić, I. Popović, T. Cvjetićanin, Beograd 2013, 89–100).

Црнобрња, Племић 2015 – А. Црнобрња, Б. Племић, Просторни контекст налаза икона подунавских коњаника из југоисточног дела Доње Паноније. *Зборник Народног музеја Београд*, XXII/1, 2015, 171–201. (A. Crnobrnja, B. Plemić, Prostorni kontekst nalaza ikona podunavskih konjanika iz jugoistočnog dela Donje Panonije. *Zbornik Narodnog muzeja Beograd*, XXII/1, 2015, 171–201).

Cumont 1938 – F. Cumont, Les Cavaliers danubiens. *Revue archeologique* 12, 1938, 67–70.

Даутова-Рушевљан 2006 – В. Даутова-Рушевљан, Римски оловни предмети из Срема. *Гласник Српског археолошког друштва* 22, 333–353 (V. Dautova-Ruševljan, Rimski olovni predmeti iz Srema. *Glasnik Srpskog arheološkog društva* 22, 333–353.)

Dautova-Ruševljan, Brukner 1992 – V. Dautova-Ruševljan, O. Brukner, *Gomolava: rimski period*, Gomolava 3 tom. Novi Sad 1992.

Dautova-Ruševljan, Vujović 2011 – V. Dautova-Ruševljan, M. Vujović, *Kasnoantički šlem iz Jarka.* Novi Sad 2011.

Dimitrijević 1969a – D. Dimitrijević, Istraživanje rimskog limesa u istočnom Sremu s posebnim osvrtom na pitanje komunikacija. *Osječki zbornik* 12, 1969, 81–121.

Dimitrijević 1969b – D. Dimitrijević, Progarski vinogradi i Baštine, Progar, Zemun – rimska nalazišta. *Arheološki pregled* 1, 1969, 169–173.

Domiter 2016 – O. Domiter, Novoobjavljeni ulomci votivnih pločica s prikazom podunavskih konjanika iz Arheološkog muzeja u Zagrebu. *Vjesnik Arheološkog muzeja Zagreb* 3, s., XLIX, 2016, 123–144.

Ertl 1996 – R. F. Ertl, *Donaureiter-Bleivotivtafeln: Versuch einer Typologie, Publikationen des Museumsvereines Petronell-Carnuntum Auxilliarkastell.* Petronell-Carnuntum 1996.

Ertl 2014 – R. F. Ertl, Neue Donaureiter-Bleivotivtafeln entdeckt. *Almogaren* XLIV–XLV, 2013–2014, 99–134.

Euskirchen 1993 – M. Euskirchen, Epona. *Berichte der Römisch-Germanischen Kommission* 74, 1993, 607–838.

Fromols 1958 – J. Fromols, Découverte d'une "plaquette danubienne" à Port sur Saône. *Jahrbuch des Römisch-Germanischen Zentralmuseums* 5, 1958, 259–265.

Gabričević 1972 – M. Gabričević, Olovna pločica sa predstavom dunavskih konjanika iz Velike Obarske. *Članci i građa za kulturnu istoriju istočne Bosne* 9 (Tuzla), 53–56.

Giglioli 1951 – G. Q. Giglioli, Due gemme basilidiane del Museo Archeologico di Perugia. *Archeologia Classica* 3/2, 1951, 199–208.

Gordon 2017 – R. Gordon, Projects, performance and charisma: Managing small religious groups in the Roman Empire, in: *Beyond Priesthood. Religious Entrepreneurs and Innovators in the Roman Era*, R. L. Gordon, G. Petridou, J. Rüpke (eds.), Berlin 2017, 277–315.

Hainzmann 2017 – M. Hainzmann, Aesculapius et Hygieia als Dii Maiores. *Studia Europaea Gnesensia* 16, 2017, 259–280.

Halsberghe 1972 – G. Halsberghe, *The Cult of Sol Invictus*. Leiden 1972.

Hampel 1903 – J. Hampel, Emlékek és leletek – Lovas istenségek dunavidéki antik emlékeken. *Archeológiai Értesítő* 22, 1903, 305–365.

Hijmans 2009 – S. E. Hijmans, Sol: The Sun in the Art and Religions of Rome, *dissertation*, *Proefschrift Rijksuniversiteit Groningen 2009.*

Hoffiller 1905 – V. Hoffiller, Olovna pločica sa zavjetnim reljefom iz Srpske Mitrovice. *Vjesnik Hrvatskog arheološkog društva* 8 (n. s.), 1905, 118–192.

Hoffiller 1935 – V. Hoffiller, Novi tračko-mitraički votivni reljefi. *Vjesnik Hrvatskog arheološkog društva* 16 (n. s.), 1935, 61–66.

Iconomu, Chiriac 2004 – C. Iconomu, C. Chiriac, Contribuţii la iconografia Cavalerilor danubieni în Dobrogea (II). *Arheologia Moldovei* XXVII, 2004, 83–87.

Iskra-Janošić 1966 – I. Iskra-Janošić, Rimske votivne pločice od olova u Jugoslaviji. *Opuscula archaeologica* VI, 1966, 49–68.

Ivanov 2011 – M. Ivanov, Equites danuvini serdicenses. The cronology and distribution of these monuments. *Archaeology* LII–2, 2011, 123–127.

Јованова 1995 – Л. Јованова, Споменик од култот на Дунавските коњаници. *Macedoniae Acta Archaeologica* 14, 1993–1995, 155–172. (L. Jovanova, Spomenik od kultot na Dunavskite konjanici. *Macedoniae Acta Archaeologica* 14, 1993–1995, 155–172)

Јованова 1999 – Л. Јованова, Две оловни плочи од култот на Дунавските коњаници. *Macedoniae Acta Archaeologica* 16, 1997–1999, 177–186. (L. Jovanova. Dve olovni ploči od kultot na Dunavskite konjanici. *Macedoniae Acta Archaeologica* 16, 1997–1999, 177–186).

Јовановић 1998 – А. Јовановић, Нумизматичке белешке уз култ подунавског коњаника. *Нумизматичар* XXI, 1998, 11–27. (A. Jovanović, Numizmatičke beleške uz kult podunavskog konjanika. *Numizmatičar* XXI, 1998, 11–27).

Јовановић 2007. – А. Јовановић, *Огледи из античког култа и иконографије*. Београд 2007. (A. Jovanović, *Ogledi iz antičkog kulta i ikonografije*. Beograd 2007).

Jovičić, Bogdanović 2017 – M. Jovičić, A. Bogdanović, New evidence of the cult of Epona in Viminacium. *Archaeology and Science* 13, 2017, 33–45.

Ковић 2000 – Г. Ковић, Оловне плочице подунавског коњаника из збирке Народног музеја у Шапцу. *Museum* 1, 2000, 36–48. (G. Ković, Olovne pločice podunavskog konjanika iz zbirke Narodnog muzeja u Šapcu. *Museum* 1, 2000, 36–48)

Ковић 2011 – Г. Ковић, Непубликоване иконе подунавских коњаника из Народног музеја у Шапцу. *Museum* 12, 2011, 17–30. (G. Ković, Nepublikovane ikone podunavskih konjanika iz Narodnog muzeja u Šapcu. *Museum* 12, 2011, 17–30)

Kremer 2019 – G. Kremer, Some remarks about Domnus–Domna and the Danubian Riders, in: *The Roman Provinces. Mechanisms of Integration*, S. Nemeti, E. Beu-Dachin, I. Nemeti, D. Dana (eds.), Cluj-Napoca 2019, 275–291.

Крунић 1995 – С. Крунић, Необјављене иконе подунавских коњаника из збирки Музеја града Београда. *Старинар* (н.с.) LXV–LXVI, 1994–1995, 163–172. (S. Krunić, Neobjavljene ikone podunavskih konjanika iz zbirki Muzeja grada Beograda. *Starinar* (n.s.) LXV–LXVI, 1994–1995, 163–172)

Lane 1994 – E. N. Lane, Six Plaques of the Danube-Rider Cult. *Muse* 27–28, 1993–1994, 57–68.

Любенова 2008 – В. Любенова, Иконка с изображение т. нар. Дунавски конници от разкопките при махала Арбанас, гр. Радомир, в: *Studia in honorem Alexandrae Dimitrova-Milcheva. Югоизточна Европа през античността (VI в. пр. Хр. – началото на VII в. сл. Хр.).* ред. Е. Генчева, София 2008, 189–199. (V. Luybenova, Ikonka s izobraženie t.nar. Dunavski konnici ot razkopkite pri mahala Arbanas, gr. Radomir, v: * Югoiztočna Evropa prez Antičnostta*, *Studia in Honorem Aleksandrae Dimitrova-Milcheva. Югoiztočna Evropa prez Antičnostta (VI v. pr. Hr. – načaloto na VII v. sl. Hr)*, red. E. Genčeva, Sofia 2008, 189–199.)

Лазић, Ружић 2016 – М. Лазић, М. Ружић, Оловна икона подунавских коњаника из Сувог села код Дебрца – Касноантичка светиња или… *Гласник Српског археолошког друштва* 31, 2015, 271–284. (M. Ružić, M. Lazić, Olovna ikona podunavskih konjanika iz Suvog sela kod Debrca – Kasnoantička svetinja ili… *Glasnik Srpskog arheološkog društva* 31, 2015, 271–284).

Malbašić 2021 – V. Malbašić, *U potrazi za neimenovanom boginjom: Kult podunavskih konjanika – paradigma ili zabluda*. Sremska Mitrovica 2021.

Matei-Popescu 2021 – F. Matei-Popescu, Dii Maiores at Histria (ISM I 298), in: *Arhitectura. Restaurare. Arheologie. In honorem Monica Margineanu Carstoiu*, L. C. Nistor, V. Apostol, M. C. Popescu, S. Bâlici, N. Toma (eds.), București 2021, 282–289.

Miladinović-Radmilović 2011 – N. Miladinović-Radmilović, *Sirmium necropolis*. Beograd 2011.

Milošević 1973 – P. Milošević, Fourth century tombs from Čalma near Sremska Mitrovica. *Sirmium* III, 1973, 85–96.

Nemeti, Cristea 2020 – S. Nemeti, Ș. Cristea, New Reliefs Plaques from Pojejena (Caraș-Severin county) depicting the Danubian Riders. *Ziridava*, *Studia archaeologica* 34, 2020, 277–286.

Ochsenschlager 1971 – E. L. Ochsenschlager, Lead plaques of the Danubian horseman type at Sirmium. *Sirmium* II, 1971, 51–68.

Paridaens 2010 – N. Paridaens, Une plaquette aux Cavaliers Danubiens découverte à Merbes-le-Château (Prov. Hainaut, Belgique). *Archäologisches Korrespondenzblatt*, 40/III, 2010, 411–423.

Pavlović 2005 – I. Pavlović, Olovne votivne pločice podunavskih konjanika iz zbirke Muzeja Đakovštine. *Zbornik muzeja Đakovštine*, 7/1, 2005, 91–102.

Plemić 2013 – B. Plemić, Contribution to the Study of the Danubian Horsemen Cult: Iconographic Syncretism of the Danubian Goddess and Celtic Fertility Deities. *Archaeologica Bulgarica* XVII, 2013, 59–72.

Popović 1963 – V. Popović, Sirmium, Sremska Mitrovica – rimski grad. *Arheološki pregled* 5, 1963, 69–70.

Поповић 1983 – И. Поповић, Споменици култа подунавских коњаника из Народног музеја у Београду. *Зборник Народноī музеја Беоīрад* XI-1, 53–67 (I. Popović, Spomenici kulta podunavskih konjanika iz Narodnog muzeja u Beogradu. *Zbornik Narodnog muzeja Beograd* XI-1, 53–67).

Поповић 1986 – Један доњопанонски центар за израду оловних икона подунавских коњаника. *Зборник Народноī музеја Беоīрад* XII/1, 1986, 113–122. (I. Popović, Jedan donjopanonski centar za izradu olovnih ikona podunavskih konjanika. *Zbornik Narodnog muzeja Beograd*, XII/1, 1986, 113–122.

Поповић 1988 – И. Поповић, Нове оловне иконе култа дунавских коњаника из Сирмијума. *Сшаринар* XXXIX, 1988, 105–116. (I. Popović, Nove olovne ikone kulta podunavskih konjanika iz Sirmijuma. *Starinar* XXXIX, 1988, 105–116).

Поповић 1990 – И. Поповић, Нове оловне иконе култа дунавских коњаника из Сирмијума и Сингидунума. *Годишњак īрада Беоīрада* 37, 1990, 57–62. (I. Popović, Nove olovne ikone kulta dunavskih konjanika iz Sirmijuma i Singidunuma. *Godišnjak grada Beograda* 37, 1990, 57–62).

Popović 1991 – I. Popović, Une image datée des cavaliers danubiens in Mélanges de l'Ecole française de Rome. *Antiquité* 103–1, 1991, 235–245.

Popović 2011 – I. Popović, Pagan Cults and Christianity in Sirmium from the 3rd to the middle of the 5th Century, in: *Religion in Public and private sphere (Acta of the 4th International Colloquium – The Autonomous Towns of Noricum and Pannonia),* ed. I. Lazar, Koper 2011, 235–249.

Schumacher 1997 – L. Schumacher, Aurelian, in: *Die römischen Kaiser. 55 historische Portraits von Caesar bis Iustinian*, M. Clauss (ed.), München 1997, 245–251.

Szabó 2017 – Á. Szabó, *Domna et Domnus - Contributions to the Cult-History of the "Danubian Riders" Religion.* Wien 2017.

Стојановић, Ђурђевић 2021 – М. Стојановић, Д. Ђурђевић, Представе коњаника на металним предметима из античке збирке Народног музеја у Смедеревској Паланци. *Гласник Срӣскоī археолошкоī друшшва* 37, 2021, 321–338. (M. Stojanović, D. Đurđević, Predstave konjanika na metalnim predmetima iz antičke zbirke Narodnog muzeja u Smederevskoj Palanci. *Glasnik Srpskog arheološkog društva* 37, 2021, 321–338)

Tatcheva 2000 – M. Tatcheva, Le syncrétisme religieux dans les provinces balkaniques de l'Empire romain: Les reliefs des soi-disants cavaliers danubiens. *Živa antika* 50, 2000, 231–245.

Tóth 2003 – I. Tóth, Sol Invictus Illyricus I. Problematik des sogenannten donauländischen Reitergottes, in: *Pannonica Provincialia et Archaeologia. Studia sollemnia auctorum Hungarorum Eugenio Fitz octogenario dedicata*, (LibArch I.), Á. Szabó, E. Tóth (eds.), Budapest 2003, 467–480.

Treister, Strokova, Zubar 2004 – M. Treister, L. Strokova, V. Zubar, Two Lead Plaques with a Depiction of a Danubian Horseman from the Collection of the National Museum of the History of the Ukraine. *Ancient Cilvilizations from Scythia to Siberia* Vol. 10/3, 2004, 67–76.

Tudor 1969 – D. Tudor, *Corpus monumentorum religionis equitum Danuvinorum (CMRED), 1: The monuments*, Etudes préliminaires aux religions orientales dans l'Empire romain 13. Leiden 1969.

Tudor 1976 – D. Tudor, *Corpus monumentorum religionis equitum Danuvinorum (CMRED), 2: The analysis and interpretations of the monuments*, Etudes préliminaires aux religions orientales dans l'Empire romain 13. Leiden 1976.

Vajzović 2015 – D. Vajzović, Novootkriveni nalaz pločice sa prikazom kulta dunavskog konjanika s lokaliteta Đelilovac kod Travnika. *Godišnjak centra za balkanološka ispitivanja Sarajevo*, XLIV, 2015, 95–114.

Vasić 2001 – J. Vasić, Olovne ikone podunavskog konjanika iz Muzeja grada Beograda. *Godišnjak grada Beograda* 47–48, 2000–2001, 89–98.

Zotović 1998 – Lj. Zotović, The cult of Lunar Goddes or the Cult of Danubian Horseman. *Starinar* XLIX, 1998, 63–75.

Šaranović-Svetek 1987 – V. Šaranović-Svetek, Prilog poznavanju rimskih olovnih pločica. *Rad vojvođanskih muzeja* 30, 1987, 113–117.

Резиме: БОЈАНА ПЛЕМИЋ, Академија струковних студија Београд
АДАМ Н. ЦРНОБРЊА, Народни музеј Србије

НОВИ ОСВРТ НА ТОПОГРАФСКО-ТИПОЛОШКУ ЗАСТУПЉЕНОСТ ОЛОВНИХ ПЛОЧИЦА КУЛТА ПОДУНАВСКИХ КОЊАНИКА У ЈУГОИСТОЧНОМ ДЕЛУ ДОЊЕ ПАНОНИЈЕ

Кључне речи. – оловне иконе, култ, подунавски коњаник, Доња Панонија, контекст налаза

Археолошки материјал који припада тзв. култу подунавских коњаника већ дуго времена привлачи пажњу многих истраживача, али упркос томе још увек нису дати дефинитивни одговори у погледу његове суштине. Као један од кључних проблема за то може се издвојити слабо познавање контекста налаза јер је у односу на њихову бројност процентуално врло мали број примерака откривен у процесу систематских археолошких истраживања. Имајући у виду скорија открића, уз новије каталошке прегледе оловних икона, овом приликом смо поново сагледали њихов просторни контекст и типолошку заступљеност на простору југоисточног дела провинције Доње Паноније. Разлог за то је изразито велика концентрација налаза у областима данашњег Срема, Мачве и обреновачке Посавине, које, судећи по тренутно расположивим подацима, знатно предњаче у односу на остале територије распростирања култа. Будући да су за већину оловних икона овде позната места где су нађене, сагледавајући основне карактеристике тих локалитета покушали смо да утврдимо најшири контекст коме су припадале. Како смо располагали подацима углавном добијеним приликом рекогносцирања терена, било је могуће одредити само основне врсте локалитета: насеља (укључујући урбане зоне – *Sirmium, Bassiane, Spodent*, виле рустике, мања пољска газдинства и усамљене објекте), затим некрополе и војна инфраструктура. Тако смо одредили шири контекст налаза за 98 примерака од укупно 306 комада које смо овом приликом евидентирали: 69 је нађено у насељима, 16 у зонама некропола, 8 у оквиру војног контекста, 4 примерка у оквиру насеља са некрополом, а 1 оловна икона у насељу уз војни контекст. Тиме је на овој територији показана доминација цивилног контекста, што се разликује у односу на ранију Тудорову статистику, по којој је превладавао војни контекст.

У погледу типолошке заступљености оловних плочица на територији југоисточног дела Доње Паноније, евидентирано је присуство тридесет два типа, међу којима смо издвојили 5 бројчано доминантних, међусобно доста различитих у погледу стила, иконографије и квалитета израде. То потврђује раније изнету претпоставку да се у овој области, вероватно у Сирмијуму, налазила радионица за њихову израду, док се отвара и могућност да је постојало више њих или је пак оваква хетерогеност оловних плочица била условљена хронолошким размаком у производњи услед промена у самој еволуцији култа. Такође, њихова везаност за цивилни контекст указује на то да је култ био раширен не само уз војне и урбане центре, већ и у руралним срединама, те да су га можда прихватили и шири слојеви становништва. До које мере је култ могао бити намењен њима, као и шта су били евентуални разлози продукције овако обимних серија, и коначно, какав је заиста био карактер главних порука оловних икона, само су нека од питања која ће, надамо се, послужити као корисне смернице за даља истраживања.

Table 1. Spatial Context of lead icons in the South-Eastern parts of Pannonia Inferior

Табела 1. Просторни контекст налаза оловних икона у југоисточном делу Доње Паноније

	SITE	TYPE OF SITE	TYPOLOGY	BIBLIOGRAPHY (ICONS)	BIBLIOGRAPHY (SITE)
1.	Road ERDEVIK – KUKUJEVCI, ŠID	UNKNOWN	B03	Malbašić 2021, 66, kat. B03 075.	/
2.	ERDEVIK (surroundings), ŠID	UNKNOWN	H09	Malbašić 2021, 127, kat. H09 010.	/
3–5.	KUKUJEVCI (surroundings), ŠID	UNKNOWN	B01, H02, H20	Malbašić 2021, 58, kat. B01 052, 120, kat. H02 068, 134, kat. H20 001.	/
6–8.	KUKUJEVCI (area of Groblje), ŠID	UNKNOWN	B01, F01, G02	Malbašić 2021, 58, kat. B01 053, 87, kat. F01 083, 105, kat. G0 025.	/
9.	BATROVCI (surroundings), ŠID	UNKNOWN	B03	Malbašić 2021, 69, kat. B03 092.	/
10.	BAĆINCI (north of the village), ŠID	UNKNOWN	F01	Malbašić 2021, 95, kat. F01 125.	/
11–14.	ILINCI (surroundings), ŠID	UNKNOWN	B01, B02, F02, H02	Malbašić 2021, 55, kat. B01 038, 61, kat. B02 033, 97–98, kat. F02 017, 119, kat. H02 062.	/
15.	ADAŠEVCI (surroundings), ŠID	UNKNOWN	F01	Malbašić 2021, 92, kat. F01 111.	/
16.	ADAŠEVCI – ŠID (on the road between)	UNKNOWN	F01	Malbašić 2021, 94, kat. F01 116.	/
17–19.	Between the villages MOROVIĆ and VIŠNJIĆEVO, ŠID (50 m from the Bosut River)	SETTLEMENT	B01 (3 pcs.)	Malbašić 2021, 59, kat. B01 058, B01 059, B01 060.	Црнобрња 2020, 177, бр. 74.[1]
20.	MOROVIĆ (bank of the Bosut river), ŠID	SETTLEMENT/ NECROPOLIS	B01	Malbašić 2021, 59, B01 061.	Црнобрња 2020, 177, бр. 73.
21.	MOROVIĆ (surrounding forest)	UNKNOWN	F01	Malbašić 2021, 86, kat. F01 080.	/
22.	TOVARNIK (area of Žućine njive), ŠID	UNKNOWN	B03	Malbašić 2021, 69, B03 091.	/
23.	Road BAČINCI-GIBARAC (south), ŠID	UNKNOWN	H01V	Malbašić 2021, 115, kat. H01V 014.	/
24.	SREMSKA MITROVICA	SETTLEMENT	B03	Ochsenschlager 1971, no. 4, pl. I/2; Поповић 1986, 117, бр. 4; Popović 2011, 242, fig. 9; Tudor 1976, no. 215.	Ochsenschlager 1971, 53.
25.	SREMSKA MITROVICA (site 21)	SETTLEMENT	H01M	Ochsenschlager 1971, no. 12, pl. IV/8; Tudor 1976, no. 216.	Popović 1963.
26.	SREMSKA MITROVICA (site 28)	SETTLEMENT	B02	Поповић 1986, 115, сл. 2.	Miladinović-Radmilović 2011, 250.
27.	SREMSKA MITROVICA (site Kej na Savi)	SETTLEMENT	B03	Поповић 1988, 107, бр. 3.	/
28.	SREMSKA MITROVICA (KP Dom)	NECROPOLIS	H02	Поповић 1988, 108, бр. 6.	Miladinović-Radmilović 2011, 339.
29.	SREMSKA MITROVICA (Jupiter Street)	UNKNOWN	B01	Malbašić 2021, 57, kat. B01 049.	/
30.	SREMSKA MITROVICA (Stari šor Street)	UNKNOWN	H06	Malbašić 2021, 126, kat. H06 007.	/

[1] According to this reference, we have determinated type of site in terms of a larger number of icons, as it contains a review of older relevant literature for all sites.

	SITE	TYPE OF SITE	TYPOLOGY	BIBLIOGRAPHY (ICONS)	BIBLIOGRAPHY (SITE)
31–69.	SREMSKA MITROVICA	UNKNOWN	A04, A05, A12, B01 (2 pcs.), B02 (5 pcs.), B03 (2 pcs.), F01 (4 pcs.), F03 (2 pcs.), G01 (2 pcs.), G02, H01M (2 pcs.), H01V H02 (11 pcs.), H09, H18, H21, H24	Ertl 1996, 31, cat. A05 002, 39, cat. B1-023, 84, cat. F3-001, F3-002, 103, cat. H01 V-002, 109, cat. H02–028, 110, cat. H02–031, 111, cat. H02–040, H02–042, 112, cat. H02–045, H02–047; Malbašić 2021, 45, kat. A04 001, 50, kat. A12 001, 59, kat. B01 062, 60–61, kat. B02 031, B02 032, B02 037, 63, kat. B02 044, B02 045, 64–65, kat. B03 069, 68, kat. B03 088, 88, kat. F01 087, 89, kat. F01 094, 95, kat. F01 121, 96, F01 126, 102, kat. G01 028, G01 029, 106, kat. G02 029, 113, kat. H01M 045, H01M 046, 122–123, kat. H02 081, H02 082, H02 084, H02 085, H02 086, 128, kat. H09 014, 133, kat. H018 001, 134, kat. H21 002, 136, kat. H24 001.	/
70.	SREMSKA MITROVICA (Jalijska 22 Street)	UNKNOWN	B02	Ochsenschlager 1973, pl. I; Tudor 1976, no. 231.	/
71.	SREMSKA MITROVICA	UNKNOWN	B03	Iskra-Janošić 1966, 51, br. 4; Ochsenschlager 1971, no. 3; Tudor 1969, no. 128; Hoffiller 1905, 121, sl. 5.	/
72.	SREMSKA MITROVICA (surroundings ?)[2]	UNKNOWN	Undetermined	Поповић 1990, 58–59, сл. 2.	/
73.	SREMSKA MITROVICA	UNKNOWN	B01	Malbašić 2021, 57, kat. B01 051.	/
74.	SREMSKA MITROVICA (near Legeta towards Sava River)	UNKNOWN	H16, H21	Malbašić 2021, 132, kat. H16 002, 134, kat. H21 001.	/
75–80.	SREMSKA MITROVICA (in the Sava River)	UNKNOWN	A08, B03 (4 pcs.), G01	Malbašić 2021, 48, kat. A08 007, 70, kat. B03 095, B03 096, B03 097, B03 098, 102, G01 030.	/
81–95.	SREMSKA MITROVICA (surroundings)	UNKNOWN	A01 (2 pcs.), A02, A08, B01, B03 (2 pcs.), F01 (4 pcs.), H01M, H01V (2 pcs.), H02	Ertl 1996, 27, cat. A01–001, A01–002, 28, cat. A2 001; Malbašić 2021, 44, kat. A02 00, 48, kat. A08 006, 54, kat. B01 037, 65, kat. B03 073, 68, kat. B03 088, 85, kat. F01 074, F01 076, F01 079, F01 109, 113, kat. H01M 042, 115, kat. H01V 017, 116, kat. H01V 019, 118, kat. H02 060.	
96.	SALAŠ NOĆAJSKI (area of Kotaruša)	SETTLEMENT	B02	Malbašić 2021, 63, kat. B02 043.	Црнобрња 2020, 257, бр. 347.
97.	NOĆAJ (area of Macina njiva)	SETTLEMENT	F02	Malbašić 2021, 98, kat. F02 018.	Црнобрња 2020, 258, бр. 353.
98.	NOĆAJ (surroundings)	UNKNOWN	G02	Malbašić 2021, 105, kat. G02 027.	/
99.	RADENKOVIĆ (site of Crkvine)	SETTLEMENT	B03	Malbašić 2021, 67, kat. B03 079.	Црнобрња 2020, 259, бр. 360, 361, 362.[3]
100.	RADENKOVIĆ (site of Ćeramide)	SETTLEMENT	G02	Malbašić 2021, 104, kat. G02 023.	Црнобрња 2020, 259, бр. 358.

2 From the Museum in Mladenovac.

3 This site is settled in the vicinity of Radenković village, but administratively it belongs to an area of Banovo polje.

	SITE	TYPE OF SITE	TYPOLOGY	BIBLIOGRAPHY (ICONS)	BIBLIOGRAPHY (SITE)
101.	RADENKOVIĆ	UNKNOWN	H02	Malbašić 2021, 118, kat. H02 058.	/
102–103.	MAČVANSKA MITROVICA (site PD “Mačva”)	SETTLEMENT	F01 (2 pcs.)	Поповић 1988, 109–110, бр. 7, 9.	Црнобрња 2020, 256, бр. 343.
104.	MAČVANSKA MITROVICA (site of Zidine)	SETTLEMENT	B03	Iskra-Janošić 1966. 51, br. 7; Ochsenschlager 1971, no. 2; Tudor 1969, no. 127; Hoffiler 1935, 64–65, sl. 5.	Црнобрња 2020, 256, бр. 345.
105–108.	MAČVANSKA MITROVICA	UNKNOWN	B02 (2 pcs.), G01 (2 pcs.)	Iskra-Janošić 1966, 52, br. 16; 55, br. 1, 2; Ochsenschlager 1971, no. 6, 7, 9, 10, pl. II/4, III/5; Tudor 1976, no. 125, 126, 217, 218; Hoffiller 1905, 118, sl. 1, 197, sl. 2.	/
109–110.	MAČVANSKA MITROVICA (surroundings)	UNKNOWN	B01, H01V (2 pcs.)	Malbašić 2021, 59, kat. B01 057, 115, kat. H01V 016, 117, kat. H01V 025.	/
111.	MAČVANSKI PRIČINOVIČ (area of Mlakva)	UNKNOWN	G04	Malbašić 2021, 108, kat. G04 005.	/
112.	LAĆARAK (site of Selište)	SETTLEMENT/ NECROPOLIS	G01	Поповић 1988, 111, сл. 11.	Црнобрња 2020, 188, бр. 108.
113–117.	LAĆARAK (surroundings)	UNKNOWN	A01, A13, A17, B03, F01	Malbašić 2021, 44, kat. A01 003, 50, kat. A17 001, 52, kat. A13 001, 65, kat. B03 072, 92–93, kat. F01 110.	/
118–119.	SREMSKA RAČA (surroundings)	UNKNOWN	F01, H02	Malbašić 2021, 88, kat. F01 090, 118, kat. H02 057.	/
120.	SREMSKA RAČA (area of Krivaja)	UNKNOWN	H01M	Malbašić 2021, 112, kat. H01M 041.	/
121.	SREMSKA RAČA (area of Budžaci)	UNKNOWN	H02	Malbašić 2021, 122, kat. H02 077.	/
122.	IZVORAC (between villages Divoš, Martinci and Laćarak)	NECROPOLIS	H01M	Поповић 1988, 111, бр. 12; Popović 1991, 239, fig. 3.	Milošević 1973.
124.	IZVORAC	NECROPOLIS	H02	Поповић 1988, 108, бр. 5.	Milošević 1973.
125.	KUZMIN	NECROPOLIS[4]	H01M	Поповић 1986, 235–245; Popović 1991; Popović 2011, 242, fig. 9.	/
126.	KUZMIN (surroundings)	UNKNOWN	H01M	Malbašić 2021, 113, kat. H01M 043.	/
127.	KUZMIN (area of Ciglana)	UNKNOWN	H01V	Malbašić 2021, 116, kat. H01V 021.	/
128.	KUZMIN (surroundings)	SETTLEMENT	G02	Malbašić 2021, 105, kat. G02 028.	Црнобрња 2020, 186, бр. 101, 102.
129.	KUZMIN – MARTINCI (area of Poloj)	UNKNOWN	G04	Malbašić 2021, 111, kat. G08 001.	/
130.	DIVOŠ	UNKNOWN	F02	Iskra-Janošić 1966, 54, br. 3; Tudor 1969, no. 135; Hoffiller 1905, 204–207, sl. 29.	/

[4] It was found in a double grave with inhumed deceased (no. 17–17a). In the neighboring grave (no. 18), coins of Emperor Gordian III minted in Viminacium 242/43 have been discovered.

	SITE	TYPE OF SITE	TYPOLOGY	BIBLIOGRAPHY (ICONS)	BIBLIOGRAPHY (SITE)
131–137.	ČALMA	UNKNOWN	B03, F01 (6 pcs.)	Hampel 1903, 352, br. 56; Hoffiller 1905, 123, sl. 6; Iskra-Janošić 1966, 55, br. 1; Tudor 1969, no. 138; Malbašić 2021, 67, kat. B03 083, 88, kat. F01 088, F01 089, 89, kat. F01 091, F01 092, F01 093.	/
138–145.	ČALMA (surroundings)	UNKNOWN	B01 (3 pcs.), B03, G01, G02, G04, H02	Malbašić 2021, 54, kat. B01 035, B01 036, B01 043, 64, kat. B03 067, 100, kat. G01 021, 104, kat. G02 019, 107, kat. G04 002, 121, kat. H02 076.	/
146.	MANĐELOS (surroundings)	UNKNOWN	F01	Malbašić 2021, 94, kat. F01 119.	/
147–148.	ŠAŠINCI	UNKNOWN	B03, H01V	Iskra-Janošić 1966, 51, br. 5; Ochsenschlager 1971, no. 1; Tudor 1976, no. 219; Malbašić 2021, 114, kat. H01V 010.	/
149.	ŠULJAM	UNKNOWN	B02	Iskra-Janošić 1966, 53, br. 17; Ochsenschlager 1971, no. 5, pl. II/3; Tudor 1976, no. 220.	/
150–151.	VELIKI RADINCI (surroundings)	NECROPOLIS	B02, H02	Malbašić 2021, 61, kat. B02 036, 123, kat. H02 087.	Црнобрња 2020, 186, бр. 98.
152.	VIZIĆ (site of Crkvine)	NECROPOLIS	B02	Iskra-Janošić 1966, 52, br. 14; Tudor 1976, no. 223.	/
153.	DUMBOVO (site of Marin Do)	SETTLEMENT	Undetermined	Brukner 1976, T. XV, 21.	Црнобрња 2020, 163–164, бр. 20.
154.	JARAK (near so-called Smrdljivi kanal)	SETTLEMENT	B01	Malbašić 2021, 56, kat. B01 042.	Црнобрња 2020, 191, бр. 118
155.	JARAK	SETTLEMENT	H01M	Iskra-Janošić 1966, 56, br. 7; Tudor 1976, no. 213; Šaranović-Svetek 1987, 113, sl. 1.	Dautova-Ruševljan, Vujović 2011, 36–37.
156.	JARAK	UNKNOWN	H02	Поповић 1988, 107, бр. 4.	
157–158.	NERADIN (surroundings), IRIG	UNKNOWN	B01, H01V	Malbašić 2021, 56, kat. B01 046, 116, kat. H01V 023.	/
159.	NERADIN (on the road Irig-Krušedol), IRIG	SETTLEMENT	B03	Malbašić 2021, 70, kat. B03 094.	Црнобрња 2020, 193, бр. 123.
160.	BEŠKA (surroundings), INĐIJA	UNKNOWN	F01	Malbašić 2021, 85, kat. F01 075.	/
161.	BEŠKA (area of Paćanovci)	UNKNOWN	F01	Malbašić 2021, 91, F01 103.	/
162–164.	NOVI KARLOVCI (surroundings), INĐIJA	UNKNOWN	B01, F01, G02	Malbašić 2021, 57, kat. B01 050, 92, kat. F01 108, 104, kat. G02 021.	/
165.	NOVI KARLOVCI (site of Budvar), INĐIJA	UNKNOWN	B03	Malbašić 2021, 68, kat. B03 085.	/
166.	NOVI KARLOVCI (surroundings of the site of Stari Sasi), INĐIJA	SETTLEMENT/ NECROPOLIS	B03	Malbašić 2021, 68, kat. B03 087.	Црнобрња 2020, 200, бр. 149.[5]
167.	LJUKOVO (surroundings), INĐIJA	SETTLEMENT	G01	Malbašić 2021, 101, kat. G01 024.	Црнобрња 2020, 200, бр. 146.[6]

[5] According to the description, it corresponds to the site of Vodice.

[6] It belongs to the area of Inđija, but it is next to the village of Ljukovo.

	SITE	TYPE OF SITE	TYPOLOGY	BIBLIOGRAPHY (ICONS)	BIBLIOGRAPHY (SITE)
168–169.	MALI RADINCI (RUMA)	UNKNOWN	A05, B01	Malbašić 2021, 46, kat. A05 003, 56, kat. B01 044.	/
170.	RUMA (in the direction of Stara Pazova)	UNKNOWN	F01	Malbašić 2021, 86, kat. F01 077.	/
171.	RUMA (near the highway)	UNKNOWN	F01	Malbašić 2021, 86–87, kat. F01 078.	/
172.	RUMA (site of Zlatara)	SETTLEMENT	F01	Брукнер 1995, 138, Т. VI/63, XX/1.	Црнобрња 2020, 203, бр. 158.
173–176.	RUMA (area of Fišerov salaš)	UNKNOWN	B03, G02, H02, H09	Malbašić 2021, 67, kat. B03 080, 104, kat. G02 022, 120, kat. H02 069, 128, kat. H09 012.	/
177.	VOGANJ (north from the village), RUMA	SETTLEMENT	F01	Malbašić 2021, 86, kat. F01 081.	Црнобрња 2020, 201, бр. 150.[7]
178.	VOGANJ (Višnjevci), RUMA	UNKNOWN	G02	Malbašić 2021, 103, kat. G02 017.	/
179.	ŽARKOVCI (area of Tri vile), RUMA	UNKNOWN	F02	Malbašić 2021, 97, kat. F02 014.	/
180.	BUĐANOVCI (area of Zlatara)	UNKNOWN	B02	Malbašić 2021, 61, kat. B02 034	/
181.	BUĐANOVCI (area in the direction of the site Fišerov salaš)	SETTLEMENT	H01V	Malbašić 2021, 116, kat. H01V 022.	Црнобрња 2020, 192, бр. 119 и 120.[8]
182.	HRTKOVCI (near the Sava River)	SETTLEMENT	A05	Malbašić 2021, 46, kat. A05 004.	Црнобрња 2020, 210, бр. 176.
183.	HRTKOVCI (site of Selište)	SETTLEMENT	A05	Ochsenschlager 1971, no. 13, pl. V/9; Tudor 1969, no. 146.	Црнобрња 2020, 211, бр. 180.
184–185.	HRTKOVCI (area of Vranj)	SETTLEMENT	A07, B02	Даутова-Рушевљан 2006, 341, сл. 4/2; Malbašić 2021, 47, kat. A07 002.	Црнобрња 2020, 210, бр. 177.
186.	HRTKOVCI (site of Gomolava)	SETTLEMENT	B02	Dautova-Ruševljan i Brukner 1992, 62, T. 8/39; Даутова-Рушевљан 2006, 341, sl. 4/1.	Црнобрња 2020, 210, бр. 176.
187.	HRTKOVCI	NECROPOLIS	H02	Даутова-Рушевљан 2006, 342, сл. 4/3.	Црнобрња 2020, 211, бр. 179.
188–189.	HRTKOVCI	UNKNOWN	B01, H02	Šaranović-Svetek 1987, 114, sl. 2; Malbašić 2021, 55, kat. B01 041.	/
190–194.	HRTKOVCI (surroundings)	UNKNOWN	A16, F01, G02, H02, J01	Malbašić 2021, 52, kat. A16 001, 87, kat. F01 085, 104, kat. G02 020, 119, kat. H02 065, 138, kat. J01 002.	/
195.	HRTKOVCI (area in the direction of Platičevo)	SETTLEMENT	B02	Malbašić 2021, 61, kat. B02 040.	Црнобрња 2020, 212, бр. 185 (lok. Karakuša).
196.	PLATIČEVO (site of Bokšina)	SETTLEMENT	B02	Поповић 1988, 105, бр. 1.	Црнобрња 2020, 214, лок. 190.
197.	PLATIČEVO	UNKNOWN	B03	Поповић 1988, 106, бр. 2.	/
198.	PUTINCI	UNKNOWN	H02	Iskra-Janošić 1966, 58, br. 3; Hampel 1903, 359, br. 63; Hoffiller 1935, 125, sl. 1.	/
199.	DONJI PETROVCI (*Bassiane*) (surroundings)	UNKNOWN	B01	Malbašić 2021, 55, kat. B01 040.	/
200–204.	DONJI PETROVCI (*Bassiane*)	SETTLEMENT	B02 (2 pcs.), B03, F01, H01M	Hoffiller 1905, 121, sl. 2, 4; Iskra-Janošić 1966, 51, 52, br. 3, 13; Tudor 1969, no. 133–134; Поповић 1988, 109, бр. 8, 111, бр. 11; Domiter 2016, 125–132, sl. 1.	Црнобрња 2020, 207–209, бр. 173

7 The site of Brailovo administratively belongs to the area of the village Stejanovci, but it is located near to Voganj in the north.
8 According to the area description in Malbašić 2021.

	SITE	TYPE OF SITE	TYPOLOGY	BIBLIOGRAPHY (ICONS)	BIBLIOGRAPHY (SITE)
205–206.	PRHOVO	UNKNOWN	G02, H01M	Iskra-Janošić 1966, 56, br. 3, 6; Ochsenschlager 1971, no. 8, pl. III/6, no. 11. pl. IV/7; Popović 1991, 240, fig. 4, 242, fig. 5; Tudor 1976, no. 221–222.	/
207.	PRHOVO	UNKNOWN	H02	Iskra-Janošić 1966, 58, br. 2; Tudor 1969, 140; Hoffiller 1935, 62–63, sl. 1.	/
208.	PROGAR (site of Baštine)	SETTLEMENT	B02	Vasić 2001, 92, br. 3, sl. 3; Gabričević 1972, 56, nap. 9; Dimitrijević 1969b, 171, T. XLVI, sl. 1.	Црнобрња 2020, 240–241, бр. 285.
209.	VOJKA (site of Jarkovci/Begluk)	SETTLEMENT MILITARY	F02	Vasić 2001, 90, br. 1; Dimitrijević 1969a, 84, sl. 3; Iskra-Janošić 1966, 54, br. 1; Tudor 1976, no. 214.	Црнобрња 2020, 222, бр. 217.
210.	VOJKA (area of Mala Tapavica)	UNKNOWN	B02	Malbašić 2021, 61, kat. B02 035.	/
211.	VOJKA (area aof Velika Tapavica)	SETTLEMENT	F01	Malbašić 2021, 94, kat. F01 117.	Црнобрња 2020, 221, бр. 214.
212–215.	VOJKA (surroundings)	UNKNOWN	F01, F02 (3 pcs.)	Malbašić 2021, 92, kat. F01 111, 97, kat. F02 013, F02 015, F02 016.	/
216.	POPINCI (area of Veliki drumovi)	SETTLEMENT	F01	Malbašić 2021, 92, kat. F01 105.	Црнобрња 2020, 218, бр. 206.[9]
217.	POPINCI – DONJI PETROVCI (between two villages)	UNKNOWN	G04	Malbašić 2021, 108, kat. G04 006.	/
218–219.	KRNJEŠEVCI (area of Kod Ciglane)	UNKNOWN	F01 (2 pcs.)	Malbašić 2021, 95, kat. F01 123, F01 124.	/
220.	NIKINCI, PEĆINCI	UNKNOWN	F01	Malbašić 2021, 94, kat. F01 120.	/
221.	KLENAK (forest of Karakuša)	UNKNOWN	H01M	Malbašić 2021, 112, kat. H01M 039.	/
222.	KLENAK (surroundings)	SETTLEMENT /NECROPOLIS	H01V	Malbašić 2012, 115, kat. H01V 013.	Црнобрња 2020, 214–215, бр. 194, 195, 196.[10]
223.	KLENAK (bank of the Sava River), ŠABAC	SETTLEMENT	B03	Malbašić 2021, 64, kat. B03 068.	Црнобрња 2020, 214, бр. 194.
224.	OGAR (area of Frtalji), PEĆINCI	UNKNOWN	B01	Malbašić 2021, 57, kat. B01 048.	/
225–226.	OGAR (area of Kamenite njive), PEĆINCI	UNKNOWN	B02, F01	Malbašić 2021, 62, kat. B02 084, 94, kat. F01 115.	/
227.	OGAR (area of Vukovac), PEĆINCI	UNKNOWN	F01	Malbašić 2021, 87, kat. F01 084.	/
228.	OGAR (area of Krčenik), PEĆINCI	UNKNOWN	G01	Malbašić 2021, 101, kat. G01 023.	/
229.	OGAR, PEĆINCI	UNKNOWN	G02	Malbašić 2021, 103, kat. G02 018.	/
230.	OBREŽ, PEĆINCI	NECROPOLIS	B03	Malbašić 2021, 67–68, kat. B03 084.	Црнобрња 2020, 231, бр. 254.
231–233.	GRABOVCI (surroundings), PEĆINCI	UNKNOWN	F01 (2 pcs.), H02	Malbašić 2021, 92, kat. F01 106, F01 107, 122, kat. H02 078	/
234.	GRABOVCI (area of Stari Vitojevci), PEĆINCI	UNKNOWN	F01	Malbašić 2021, 95, kat. F01 122.	/
235.	SREMSKI MIHALJEVCI (area of Novi breg)	UNKNOWN	F01	Malbašić 2021, 91, kat. F01 104.	/
236.	UGRINOVCI	UNKNOWN	H01M	Vasić 2001, 94, br. 4, sl. 4.	/
237.	UGRINOVCI (area of Iza kuća)	SETTLEMENT	F01	Malbašić 2021, 92, kat. F01 113.	Црнобрња 2020, 232, бр. 259.

[9] Today is located in the area of the village Golubinci.

[10] In the immediate vicinity of Klenak, there are three sites of civilian character.

	SITE	TYPE OF SITE	TYPOLOGY	BIBLIOGRAPHY (ICONS)	BIBLIOGRAPHY (SITE)
238.	BATAJNICA (site of Klisina)	SETTLEMENT	F02	Vasić 2001, 92, br. 2, sl. 2.	Црнобрња 2020, 233, бр. 261.
240.	BATAJNICA (area of 13 maj, bank of the Danube River)	UNKNOWN	B03 (2 pcs.)	Malbašić 2021, 68–69, kat. B03 089, B03 090.	/
241.	ZEMUN (bank of the Danube River)	SETTLEMENT	G02	Поповић 1990: 57–58, сл. 1.	/
242.	ZEMUN POLJE (surroundings)	MILITARY	H19	Malbašić 2021, 133, kat. 019 001.	Црнобрња 2020, 234, бр. 263.
243.	NOVI BANOVCI (*Burgenae*)	MILITARY	B03	Iskra-Janošić 1966, 51, br. 2; Tudor 1969, no. 143; Hoffiller 1935, 63–64, sl. 3.	Црнобрња 2020, 219–221, бр. 213.
244–245.	SURDUK (*Rittium*)	MILITARY	H02 (2 pcs.)	Iskra-Janošić 1966, 58, br. 1; Tudor 1969, no. 139; Hoffiller 1935, 63, sl. 2; Domiter 2016, 137–138, sl. 4	Црнобрња 2020, 215–216, бр. 197
246–250.	UŠĆE (*Spodent…*)	NECROPOLIS	A05, B03, F01, H01M, H05	Црнобрња, Племић 2013: 95, сл. 2; Црнобрња, Племић 2015, кат. бр. 1–5.	Црнобрња 2020, 304–305, бр. 552.
251.	UŠĆE (*Spodent…*)	UNKNOWN (civilian?)	B03	Поповић 1986, 115, бр. 3, сл. 8.	Црнобрња 2020, 304–305, бр. 552.
252.	BELJIN (*Spodent…*)	MILITARY	F02	Поповић 1986, 117, сл. 14.	Црнобрња 2020, 293–294, бр. 514
253.	BELJIN[11] (*Spodent…*)	MILITARY	B03	Iskra-Janošić 1966, 51, br. 5; Tudor 1969, br. 69; Hoffiler 1935, 64–65, sl. 5.	Црнобрња 2020, 293–294, бр. 514.
254.	BELJIN (*Spodent…*)	MILITARY	F02	Ковић 2011, бр. 2.	Црнобрња 2020, 293–294, бр. 514.
255–256.	UROVCI	NECROPOLIS	B03, F01	Црнобрња 2007, 279–281, T. I/1, I/2.	Црнобрња 2020, 308, бр. 563.
257.	ZVEČKA (site of Nurča 3)	SETTLEMENT	B03	Црнобрња, Племић 2015, кат. бр. 6.	Црнобрња 2020, 312, бр. 581.
258.	ZVEČKA (site of Marinkovića kuće)	SETTLEMENT	B03	Црнобрња, Племић 2015, кат. бр. 7	Црнобрња 2020, 310, бр. 574
259.	OBRENOVAC (site of Crkvine)	SETTLEMENT	H02	Црнобрња, Племић 2015, кат. бр. 8.	Црнобрња 2020, 309, бр. 571.
260.	DEBRC (bank of the Sava River)	MILITARY	B03	Iskra-Janošić 1966, 51, br. 6; Tudor 1969, no. 144; Hampel 1905, 13.	Црнобрња 2020, 291, бр. 502.
261.	DEBRC (site of Vinograd Živkovića)	SETTLEMENT	F02	Tudor 1969: 70.	Црнобрња 2020, 291, бр. 503.
262.	SUVO SELO, DEBRC	UNKNOWN	B03	Лазић, Ружић 2016.	/
263.	JALOVIK (site of Crkvine)	UNKNOWN	G02	Круних 1995, 164–156, сл. 2.	/
264.	NAKUČANI	SETTLEMENT	B02	Поповић 1983, 59, сл. 8.	/
265.	MAČVANSKI PRNJAVOR	SETTLEMENT	H01M	Круних 1995, 166–167, сл. 3.	Црнобрња 2020, 278, бр. 444.
266.	SLEPČEVIĆ (site of Selište)	SETTLEMENT	F01	Ковић 2011, бр. 3.	Црнобрња 2020, 275, бр. 430.
267.	ORAŠAC (site of Deonice)	NECROPOLIS	H02	Ковић 2000, 42, бр. 13.	Црнобрња 2020, 281, бр. 456.
268.	TABANOVIĆ (site of Gaj)	SETTLEMENT	B02	Ковић 2000, 38–39, бр. 4.	Црнобрња 2020, 273, бр. 422.
269.	DRENOVAC (site of Babin)	SETTLEMENT	B03	Ковић 2011, 22 бр. 1.	Црнобрња 2020, 270, бр. 410.

[11] I. Popović (Поповић 1983, 55, br. 1) states that a place of its finding is Debrc (surroundings of Ušće near Obrenovac). As the settlement near Gradština in Beljin is located in the immediate vicinity of Ušće, that is, right next to it, on the road to Debrc and in the same administrative unit, we assume that this icon was found there.

	SITE	TYPE OF SITE	TYPOLOGY	BIBLIOGRAPHY (ICONS)	BIBLIOGRAPHY (SITE)
270.	DRENOVAC (area of Lipa)	SETTLEMENT	G02	Malbašić 2021, 105, kat. G02 026.	Црнобрња 2020, 272, бр. 416.
271–273.	UZVEĆE (site of Crkvina)	SETTLEMENT	G02, B02, D07	Ковић 2011, бр. 4; Malbašić 2021, 63, kat. B02 042, 80, kat. D07 001.	Црнобрња 2020, 262, бр. 375.
274.	UZVEĆE (site of Kućište)	SETTLEMENT	G02	Malbašić 2021, 105, kat. G02 024.	Црнобрња 2020, 262, бр. 373.
275.	GLUŠCI (area of Radakuša)	UNKNOWN	F01	Malbašić 2021, 88, kat. F01 086.	/
276–277.	BOGATIĆ (area of Jabukovac)	SETTLEMENT	B03, H02	Malbašić 2021, 65, kat. B03 070, 121, kat. H02 073.	Црнобрња 2020, 266, бр. 393.
278.	ZMINJAK (area of Vranovača), BOGATIĆ	SETTLEMENT	H02	Malbašić 2021, 117, kat. H02 056.	Црнобрња 2020, 275, бр. 429.
279–280.	BOGATIĆ (site of Kućište)	SETTLEMENT	H01V (2 pcs.)	Malbašić 2021, 114, kat. H01V 012, 116, kat. H01V 018.	Црнобрња 2020, 265. бр. 389.
281.	TABANOVIĆ (surroundings), BOGATIĆ	SETTLEMENT	H02	Malbašić 2021, 118, kat. H02 059.	Црнобрња 2020, 273, бр. 422, 423, 424.[12]
282.	BOGATIĆ (area of Groblje)	UNKNOWN	H02	Malbašić 2021, 118, kat. H02 061	/
283.	BOGATIĆ (area of Jovine njive, Stamenića brdo)	SETTLEMENT	H02	Malbašić 2021, 123, kat. H02 083.	Црнобрња 2020, 266, бр. 392.
284–285.	MAČVANSKI METKOVIĆ (surroundings)	SETTLEMENT	B01, B03	Malbašić 2021, 57, kat. B01 047, 65, kat. B03 071.	Црнобрња 2020, 264–265, бр. 381–386.[13]
286.	MIOKUS (surroundings)	SETTLEMENT	B02	Malbašić 2021, 62, kat. B02 041.	Црнобрња 2020, 283, бр. 465.
287.	PROVO (surroundings), ŠABAC	SETTLEMENT	B03	Malbašić 2021, 66, kat. B03 078.	Црнобрња 2020, 289, бр. 492–494.[14]
288.	DRENOVAC (surroundings), ŠABAC	SETTLEMENT	F01	Malbašić 2021, 93, kat. F01 112.	Црнобрња 2020, 270–272, бр. 409–418.[15]
289.	DJELOVI (surroundings), BIJELJINA	SETTLEMENT	B01	Malbašić 2021, 55, kat. B01 039.	/
290.	VELINO SELO (area of Šljivice or Šljivici), Bijeljina	UNKNOWN	B01	Malbašić 2021, 58, kat. B01 056.	/
291.	DVOROVI (surroundings), BIJELJINA	SETTLEMENT	B03	Malbašić 2021, 69, kat. B03 093.	Црнобрња 2020, 248–249, бр. 306–310.[16]
292.	ORAŠJE (site of Grebenice), BIJELJINA	UNKNOWN	H01M	Malbašić 2021, 112, kat. H01M 038	/
293.	BIJELJINA (surroundings)	UNKNOWN	B03	Malbašić 2021, 68, kat. B03 086	/
294–303.	MAČVA (unknown sites)	UNKNOWN	B02 (2 pcs.) B03, F01 (3 pcs.), F02 (2 pcs.), G02 H01M (2 pcs.)	Ковић 2000, кат. 1–3, 5–12.	/
304–306.	SREM (unknown sites)	UNKNOWN	B01 (2 pcs.), B03	Malbašić 2021, 56, kat. B01 045, 58, kat. B01 054, 66, kat. B03 074.	/

[12] In the vicinity of Tabanović, there are three Roman sites determined as settlements.

[13] In the vicinity of Mačvanski Metković there are six Roman sites determined as settlements.

[14] In the vicinity of Provo, there are three Roman sites determined as settlements.

[15] In the vicinity of Drenovac, there are ten Roman sites, of which nine are settlements and one is a necropolis.

[16] In the vicinity of Dvorovi, there are five Roman sites determined as settlements.

Table 2. Typology of lead icons in the South-Eastern parts of Pannonia Inferior[1]

Табела 2. Типолошка заступљеност оловних плочица у југоисточном делу Доње Паноније

TYPE	SITE	TOTAL
A01	Sremska Mitrovica – surroundings (2), Laćarak – surroundings (1)	3
A02	Sremska Mitrovica – surroundings (1)	1
A04	Sremska Mitrovica (1)	1 (+2)
A05	Sremska Mitrovica (1), Mali Rudinci (1), Hrtkovci (2), Ušće (Spodent..) (1)	5
A07	Hrtkovci (1)	1 (+1)
A08	Sremska Mitrovica (1), Sremska Mitrovica – surroundings (1)	2 (+3)
A12	Sremska Mitrovica (1)	1
A13	Laćarak (1)	1
A16	Hrtkovci – surroundings (1)	1
A17	Laćarak – surroundings (1)	1
B01	Kukujevci (1), Kukujevci – surroundings (1), Ilinci – surroundings (1), road Morović-Višnjevo (3), Morović (1), Sremska Mitrovica (4), Sremska Mitrovica – surroundings (1), Mačvanska Mitrovica (1), Čalma – surroundings (3), Jarak (1), Neradin (1), Novi Karlovci (1), Mali Radinci (1), Hrtkovci (1), Donji Petrovci (*Bassiane*) (1), Ogar (1), Mačvanski Metković (1), Djelovi (1), Velino selo (1), Srem (2)	28 (+23)
B02	Ilinci – surroundings (1), Sremska Mitrovica (7), Salaš Noćajski (1), Mačvanska Mitrovica (2), Šuljam (1), Veliki Radinci (1), Vizić (1), Buđanovci (1), Hrtkovci (3), Platičevo (1), Donji Petrovci *(Bassiane*) (2), Progar (1), Vojka (1), Ogar (1), Nakućani (1), Tabanović (1), Uzveće (1), Miokus (1), Mačva (2)	30 (+17)
B03	Erdevik-Kukujevci (road) (1), Batrovci (1), Tovarnik (1), Sremska Mitrovica (9), Sremska Mitrovica – surroundings (2), Radenković (1), Mačvanska Mitrovica (1), Laćarak – surroundings (1), Čalma (1), Čalma – surroundings (1), Šašinci (1), Neradin (1), Novi Karlovci (2), Ruma (1), Platičevo (1), Donji Petrovci (*Bassiane*) (1), Obrež (1), Batajnica (2), Novi Banovci (B*urgenae*) (1), Ušće (*Spodent*..) (2), Beljin (1), Urovci (1), Zvečka (2), Debrc (1), Suvo selo (1), Drenovac (1), Bogatić (1), Mačvanski Metković (1), Klenak (1), Provo (1), Dvorovi (1), Bijeljina – surroundings (1), Mačva (1), Srem (1)	47 (+44)
D07	Uzveće (1)	1
F01	Kukujevci (1), Baćinci (1), Adaševci (1), Adaševci-Šid (road) (1), Morović (1), Sremska Mitrovica (4), Sremska Mitrovica – surroundings (4), Mačvanska Mitrovica (2), Laćarak – surroundings (1), Sremska Rača – surroundings (1), Čalma (6), Manđelos (1), Beška (2), Novi Karlovci (1), Ruma (3), Voganj (1), Hrtkovci – surroundings (1), Donji Petrovci (*Bassiane*) (1), Vojka (2), Popinci (1), Krnješevci (2), Nikinci (1), Ogar (2), Grabovci (3), Sremski Mihaljevci (1), Ugrinovci (1), Ušće (*Spodent*..) (1), Urovci (1), Slepčević (1), Glušci (1), Drenovac (1), Mačva (3)	54 (+ 61)
F02	Ilinci (1), Noćaj (1), Divoš (1), Žarkovci (1), Vojka (1), Vojka – surroundings (3), Batajnica (1), Beljin (2), Debrc (1), Mačva (2)	14 (+7)
F03	Sremska Mitrovica (2)	2
G01	Sremska Mitrovica (3), Mačvanska Mitrovica (2), Laćarak (1), Čalma (1), Ljukovo (1), Ogar (1)	9 (+18)
G02	Kukujevci (1), Sremska Mitrovica (1), Noćaj (1), Radenković (1), Kuzmin (1), Čalma – surroundings (1), Novi Karlovci (1), Ruma(1), Voganj (1), Hrtkovci (1), Prhovo (1), Ogar (1), Zemun (1), Jalovik (1), Drenovac (1), Uzveće (2), Mačva (1)	18 (+14)
G04	Mačvanski Pričinović (1), Kuzmin – Martinci road (1), Čalma – surroundings (1), between Popinci and Donji Petrovci (*Bassiane*) (1)	4 (+1)
H01M	Sremska Mitrovica (3), Sremska Mitrovica – surroundings (1), Sremska Rača (1), Izvorac (1), Kuzmin (1), Kuzmin – surroundings (1), Jarak (1), Donji Petrovci (*Bassiane*) (1), Prhovo (1), Klenak (1), Ugrinovci (1), Ušće (*Spodent*..) (1), Mačvanski Prnjavor (1), Orašje (1), Mačva (2)	18 (+24)
H01V	Bačinci–Gibarac road (1), Sremska Mitrovica (2), Sremska Mitrovica – surroundings (2), Mačvanska Mitrovica (2), Kuzmin (1), Šašinci (1), Neradin (1), Buđanovci (1), Klenak (1), Bogatić (2)	14 (+9)
H02	Kukujevci (1), Ilinci – surroundings (1), Sremska Mitrovica (12), Sremska Mitrovica – surroundings (1), Radenković (1), Sremska Rača (1), Sremska Rača – surroundings (1), Izvorac (1), Čalma – surroundings (1), Veliki Radinci (1), Jarak (1), Ruma (1), Hrtkovci (2), Hrtkovci – surroundings (1), Putinci (1), Prhovo (1), Grabovci (1), Surduk (*Rittium*) (2), Obrenovac (1), Orašac (1), Bogatić (1), Zminjak (1), Tabanović (1), Bogatić (2)	38 (+43)

[1] Two icons in Table 1 (no. 72, 153) are not typologically determined. All numbers in brackets next to the total number of pieces of a certain type refer to the number of lead icons of the same type in the catalogue of F. Ertl which are connected with Sremska Mitrovica or its surroundings as a possible place of their discovery, Ertl 1996, 27–128.

TYPE	SITE	TOTAL
H05	Ušće (*Spodent.*)	1
H09	Erdevik (1), Sremska Mitrovica (1), Ruma (1)	3 (+8)
H16	Sremska Mitrovica (1)	1
H18	Sremska Mitrovica (1)	1
H19	Zemun polje (1)	1
H20	Kukujevci (1)	1
H21	Sremska Mitrovica (22)	2
H24	Sremska Mitrovica (1)	1
J01	Hrtkovci – surroundings (1)	1 (+1)
	Total	**306 (+276)**

UDC: 904:[726:255.2"652"(497.11)
930.2:003.071=14'02(398)"01/03"

https://doi.org/10.2298/STA2272181G
Original research article

NADEŽDA GAVRILOVIĆ VITAS, Institute of Archaeology, Belgrade
DAN DANA, CNRS/HISOMA, Lyon

ZEUS AND HERA *SOUIDEPTĒNOI*: THE SANCTUARY AT BELAVA MOUNTAIN NEAR TURRES/PIROT

e-mail: nadia011@yahoo.com, dan.dana@mom.fr

Abstract. – In the border zone between the Roman provinces of Upper Moesia and Thrace a sanctuary dedicated to Zeus and Hera, defined by the toponymic epithet *Souideptēnoi*, was discovered on the Belava mountain, near Turres (today's Pirot). The sanctuary presumably encompassed a *temenos*, an altar and two smaller temples, oriented east-west, with the entrance on the eastern side. Unfortunately, illegal excavations were conducted on the area of the sanctuary by thieves, who stole the small reliefs offered to the deities venerated in the sanctuary, of which the authors of this paper could obtain the data of 31 fragmented votive plates, most of them inscribed. A variety of iconographic schemas, especially the standing divine couple or Zeus and Hera in quadriga, as well as the combination of three onomastics stocks (Thracian, Greek and Latin) illustrate the diversity of traditions and the cultural interferences at work during imperial times. It can be presumed that the sanctuary dedicated to Zeus and Hera *Souideptēnoi* existed from the 2nd to the end of the 3rd or the beginning of the 4th century.

Key words. – Greek epigraphy, Hera, iconography, onomastics, Pirot (Turres), sanctuary, Souidepta, Thrace, votive icons, Zeus

INTRODUCTION: DISPERSED EVIDENCE

The topic of sanctuaries in Moesia Superior has not yet been researched and published in the frame of a synthesis,[1] which would show the abundance and disparity of different sanctuaries and temple buildings (*templum*, *aedes*, *sacellum*, *fanum*, *delubra*, *spelaeum* and *sacrarium*) that existed during the period of imperial times. Therefore, rarely does the opportunity to research material from a sanctuary arise and even if it does, the architectural and archaeological material are usually quite scarce for enabling the researchers to deduce important conclusions related to the life of the sanctuary, ritual practices performed in it, dedicators, and their beliefs.[2]

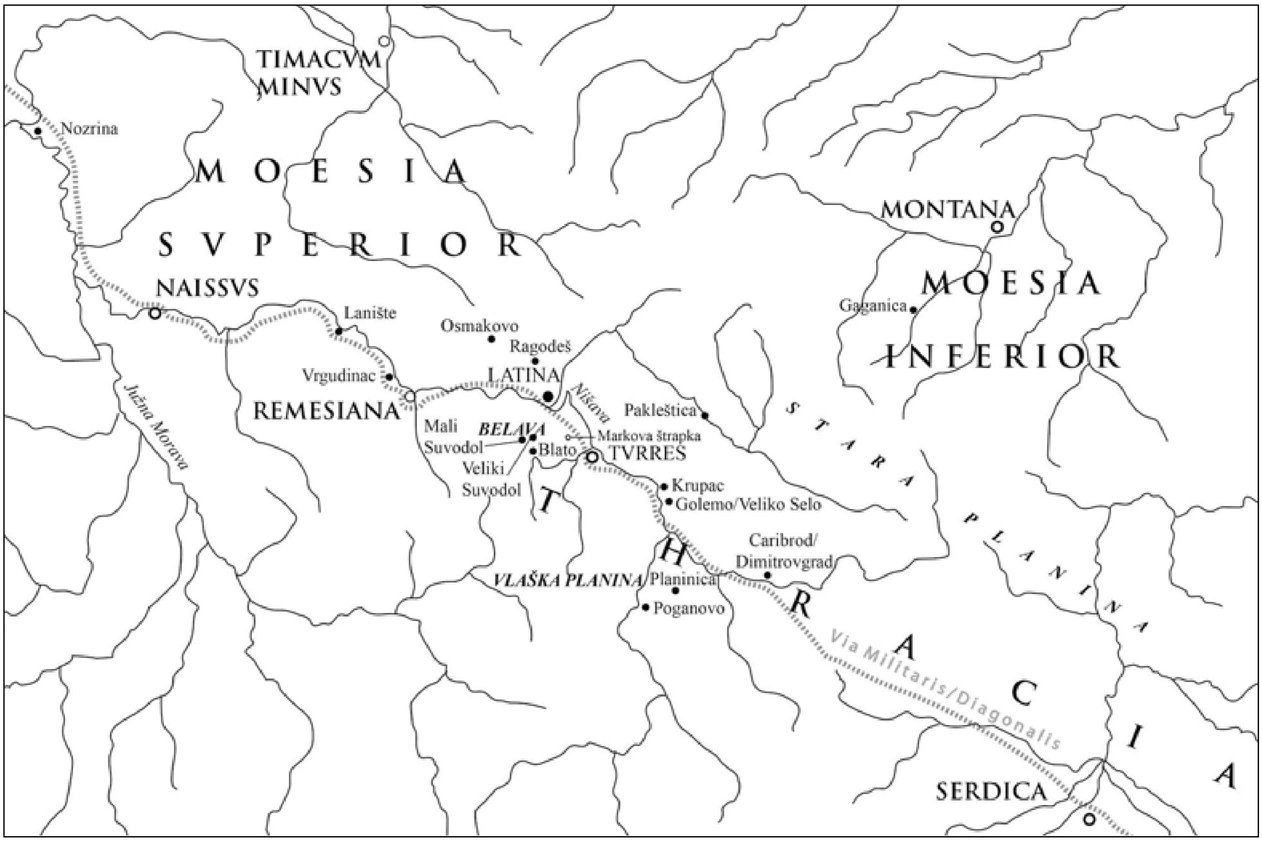
One of these rare opportunities arose thanks to a *dossier* of more than 30 complete or fragmented votive icons mainly dedicated to Zeus and Hera with the toponymic epithet *Souideptēnoi*, yielded from the regional sanctuary of imperial times of the supreme divine couple at the site of Markova štrapka on the Belava mountain. Unfortunately, all of them were discovered not during systematic archaeological research – which has never been conducted on the locality –, but in illegal excavations by treasure hunters who were looking for the

[1] The manuscript about the sanctuaries in the Roman Central Balkans is currently in preparation by one of the authors of this paper, Nadežda Gavrilović Vitas, and should be published in 2023.

[2] Not so frequent examples can be found in the sanctuary of Apollo in Paraćin, where ten votive plates depicting Apollo and the Thracian Rider were discovered (Гавриловић Витас 2021); more than dozen cult objects dedicated to Jupiter Dolichenus and Mithras have been found in the *sacrarium* of a *Dolicheneum* in Egeta/Brza Palanka (Gavrilović Vitas 2020); votive plates dedicated to Mithras or depicting the Thracian Rider were yielded in the *Mithraeum* in Singidunum (Бојовић 1977–1978).

[3] On this phenomenon, see other dedications from the Thracian space with unknown origin published by D. Dana, M. Dana 2016.

Manuscript received 19th February 2022, accepted 27th October 2022



Map 1 – Region of Pirot (D. Dana)

Карта 1 – Област Пирота (Д. Дана)

treasures of the sanctuary, before 2005.[3] Thus, the destiny of so-far known discovered votive plates was not to enter into the antiquity collections of some Serbian museums (with the exception of four pieces now in the Museum of Ponišavlje in Pirot), but to be sold to private collectors in Europe and elsewhere overseas.[4]

The Belava sanctuary, located near Turres (today's Pirot, Serbia), in the territory of Serdica, was placed in Western Thrace, very close to the passage to the province of Upper Moesia (map 1). Nine dedications (eight in Greek, one in Latin) present on Internet auctions were published more than a decade ago by one of the authors of this paper, who suspected, on the grounds of the iconography and onomastics, a provenance from Bulgaria (because of the major traffic of antiquities affecting this country) and more likely from Western Thrace,[5] which turned out to be true. At the same time, and independently, a set of 14 inscribed and uninscribed monuments from the same sanctuary was published by Aleksandar Jovanović (using only the photos), with their precise provenance: Markova štrapka on Belava mountain, near Pirot.[6] Recently, Predrag Pejić published four other pieces, purchased by the museum of Ponišavlje from Pirot, and described (with-

[4] Only four of the so-far known votive plates from the sanctuary of Zeus and Hera *Souideptēnoi* from Markova štrapka on Belava mountain were redeemed by the Museum of Ponišavlje in Pirot in 2004. We deeply thank our colleagues Predrag Pejić and Milica Ilić for this information.

[5] Dana 2009, 189–195 (*SEG* LIX 760–767; cf. A. Avram, *BÉ*, 2009, 338; A. Chaniotis, *EBGR* 2009, 47 [*Kernos*, 25, 2012, 201]), using the illustrations generously provided by *Gorny und Mosch* (Munich) and Randall Hixenbaugh (*Hixenbaugh Ancient Art*, New York).

[6] Јовановић 2008 (*AÉ*, 2017, 1266 *octies* 2 a, b, c and d, with the corrected readings and commentaries of Nikolaj Šarankov); five photos of reliefs also in Пејић 2015, Pl. CXXXIa.5–9. Some of these pieces arrived, through the traffic of antiquities, in Germany and in the USA, being published independently by Dana 2009; the relief no. 11 of Јовановић 2008 was known through a photo (offered by Predrag Pejić), whilst the reliefs nos. 12–14 of Јовановић 2008 (through photos) were given to him for publication by Milorad Stojić.

out illustration) another three inscribed pieces.[7] We had the opportunity to use photos of the same four pieces, adding for this paper four anepigraphic pieces that belonged very likely to the same lot (sold on the antiquities market) and, in two appendices, other pieces depicting Zeus and Hera, also from Western Thrace. We can now present 31 pieces, complete or fragmentary, unearthed in the Belava sanctuary, most of them inscribed (at least 25). This variegated *dossier* allows us to make certain assumptions about the destiny of the sanctuary, the gods revered inside, and its dedicators, for the existence of this cult centre from the 2nd until the end of the 3rd or the beginning of the 4th century.[8]

It is useful to note other recent discoveries from regional sanctuaries, especially in the western part of Thrace, combining groups of inscriptions and, when the evidence is larger, toponymic epithets: for instance, the sanctuary of Zeus and Hera from Kozi Gramadi (near Philippopolis), with a typical iconography;[9] the sanctuary of Ἥρως Σπαρτοκος from Strjama (dept. of Plovdiv);[10] the sanctuary of Hera from Novi Han, in the territory of Serdica;[11] the toponymic epithet Αρβισηνός at Ribnovo (dept. of Blagoevgrad), in the territory of Nicopolis ad Nestum;[12] other sanctuaries in the region of Pernik, for instance that of Ἥρως Σουιτουληνός on the top Ogoja, near Červena mogila.[13]

THE SITE: BELAVA MOUNTAIN AND MARKOVA ŠTRAPKA

Markova štrapka, "Marko's foot-mark"[14], is an interesting micro-toponym on the top of the Belava mountain, situated between the village of Veliki Suvodol and Pirot (to which territory Markova štrapka belongs). The site is surrounded by the Pirot valley, with Vlaška Planina to the south and Stara Planina to the north, above the Nišava river. The area where Markova štrapka lies is the westernmost part of the province of Thrace, on the border with Upper Moesia, which, by so-far known archaeological and historical knowledge, lay between the centres of Turres/Pirot and Remesiana/Bela Palanka. The modern town of Pirot, antique Turres, was an important *mansio* where several antique settlements existed, as evidenced by epigraphic and archaeological monuments and buildings (see below).

Thus, it is not unusual to presume the existence of several local larger and smaller sanctuaries and shrines in the mentioned area. Probably in the 2nd century a prominent sanctuary dedicated to the supreme divine couple Zeus and Hera with the toponymic epithet *Souideptēnoi* was built on the site of Markova štrapka, on the top of the south-eastern part of the Belava mountain.[15] Unfortunately, due to illegal excavations, no traces of a pre-Roman sanctuary that could have existed on the site were confirmed, contrary to other similar localities with Zeus and Hera sanctuaries, where Iron Age cult activities have been attested or inferred during archaeological excavations.[16] Although no systematic archaeological excavations have been conducted on the area of the sanctuary, Predrag Pejić visited the site several times and concluded that the sanctuary consisted of a *temenos*, an altar and two temples, with a size of 22 x 12 m.[17] The *temenos* was oriented east-west and is documented as being broken medium-sized and larger blocks of limestone joined with mortar. While remains of all three walls of the *temenos* were confirmed, only the northern wall is missing; P. Pejić supposes a devastation event either during the building of a near-by early Byzantine fort, or by looters, whilst including the fact that the north-western angle of the sanctuary was actually a wall of one of two temples. Both temples were situated in the western part of the *temenos* and each had two rooms, with the entrance on the east side. Judging by the finds of bricks and *imbrices*, both buildings had roofs. Inside the *temenos,* a cultural stratum approx. 0.5 m thick has traces of burning, fragments of stone, mortar, animal bones and,

---

7 Пејић 2022.

8 Important data was also obtained from the paper of colleague Predrag Pejić and his descriptions of the architectural remains of the sanctuary in Markova štrapka (Пејић 2022).

9 Hristov 2014 (standing divine couple, but also Zeus and Hera driving in a quadriga).

10 Sharankov, Cherneva-Tilkiyan 2005; Sharankov 2007, 438–440 (only one inscription is signalled in *SEG* LVIII 709 = *AÉ*, 2008, 1220).

11 Пенчева 2014.

12 Паскова, Вълчев 2006.

13 Любенова 2008.

14 Geological phenomena and ruins associated with the legendary image of Prince Marko (Marko Kraljević), see Srejović 1958.

15 Пејић 2015, 383–384 (Pl. CXXXIab); Пејић 2022.

16 Like the sanctuary in Kozi Gramadi (near Philippopolis), where the religious activities are apparently documented as early as the 8th c. BC (Hristov 2014, 12); E. Penčeva supposes that the sanctuary dedicated to Hera (and possibly Zeus) near the village of Novi Han (near Serdica) could have existed in the pre-Roman period (Пенчева 2014, 107).

17 Пејић 2015, 383; Пејић 2022, 18, 30, пл. 1.

rarely, of ceramic vessels. A small basin for water, of a trapezoid shape (1.5 x 0.9/0.3 x 0.5 m), is situated some 60 m south-east of the sanctuary, which could have been in use during ritual practices, that is for the ritual of libation made by worshippers visiting the sanctuary.

Some 250 m west of the sanctuary, at the top of the site, an area approx. 20 x 20 m is noticeable, presumably a small tower (*burgus*), built of wood.[18] The geographical position would favour such a presumption, because the site of Markova štrapka is above the road and a small fortified position or watch-tower would be expected in such a location, to control the communication in question.

THE MONUMENTS: ICONOGRAPHY AND TEXTS

The dispersion of monuments from the Belava sanctuary in the commerce of antiquities (Germany and the USA, and maybe other countries), which has occured in the last decades, especially the Balkan regions, made impossible their study, with the exception of the four pieces entered in the collection of the museum of Ponišavlje in Pirot.

Among the votive icons recovered from the sanctuary on Belava mountain, most of them are of good execution, although few are complete, generally being broken into several pieces. The majority of the reliefs honour the divine couple Zeus and Hera (various types, see below), or just one of them. When the inscriptions are preserved or not defaced, we can see that Zeus and Hera are, in fact, epichoric deities, recognised by a toponymic epithet. With the exception of a sole Latin dedication, all others are in Greek, as Turres belonged to a Hellenophone province (Thrace). The chronology of the reliefs is indicated, when possible, by combining stylistic, palaeographic and onomastic criteria (peregrine names or imperial *gentilicia*).

The monuments are arranged in this paper according to different iconographic schemas, well-attested in Thrace:[19]

– (I) type *LIMC* IV 2, 720–721 B.1: standing Zeus and Hera, each of them holding a sceptre in the left hand, and a phiale in the right hand, Zeus sacrificing above an altar, and Hera holding the phiale above an eagle (**1–15**).

– (II) Zeus and Hera (?) enthroned (**16**), which remains an ambiguous identification, as the piece is broken.

– (III) type *LIMC* IV 2, 721 B.2: Zeus brandishing a thunderbolt or a sceptre in the right hand and Hera driving in a quadriga pulled by horses galloping to the right; an eagle with outstretched wings stands in the centre of the scene; under the horses, a serpent crawls to the right, towards an altar or a tree (**17–28**).

– (IV) Zeus sacrificing alone, holding a sceptre in the left hand and a phiale in the right hand, above an altar (**29**).

– (V) type *LIMC* IV 2, 720 A.1: Hera sacrificing alone, holding a sceptre in the left hand, and in the right hand a phiale, above an altar (**30**).

– (VI) the motif of the so-called "Thracian Rider" (**31**).

(I) Votive icons with the schema of Zeus and Hera sacrificing.

1. Fragmentary dedication to Zeus and Hera *Souideptēnoi*

Two adjoining fragments of a trapezoid shaped plate of white marble (ca. 17 x 24 cm; the lower part is missing), depicting Zeus and Hera standing (type *LIMC* IV 2, 437 no. 11, 440 no. 22). On the left side of the icon, Hera is standing dressed in a long chiton, with a veil on her head. The facial traits are only indicated and the goddess is holding a sceptre in her raised left hand, while in her right hand she holds a phiale over an altar on her right side. In front of the altar, an eagle is standing with outstretched wings. On the right of the eagle, Zeus is depicted as a mature bearded man, with a naked muscular torso. His hair is wavy and falling on his shoulders, while his facial traits are as in Hera's image, only indicated. A mantle over his left shoulder is tied around his waist and falls down his legs. Zeus is holding a sceptre in his left hand, and a phiale in his right hand. An inscription is slightly incised, above the relief (ht. of letters: 1 cm), and certainly below it; on the second fragment, the line is almost completely erased. Lunate *epsilon* and *sigma*. Private collection, thereafter *Hixenbaugh Ancient Art* (inv. no. 3129); Dana 2009, 192–193, no. 6, photo (*SEG* LIX 764). II–III AD (according to the stylistic characteristics of this quite mediocre work of a local artisan, maybe in the 3rd century).

---

[18] Пејић 2015, 384–385.

[19] For the iconographic types and dedications to the couple Zeus-Hera in Thrace (a considerable *dossier*), see Младенова 1966; Stojanov 1988 (Hera in Thrace); Velkov, Gerassimova-Tomova 1989, 1345–1349 (Zeus and Hera in Thrace and Lower Moesia).



After: Hixenbaugh Ancient Art 3129
Према: Hixenbaugh Ancient Art 3129

Διὶ καὶ Ἥρᾳ Σου̣[ι]δ̣ε̣[πτηνοῖς]
relief
[-----------------------------------].

The name of the dedicator is not preserved.

2. Dedication of Silbanos son of Apollonios

A rectangular relief broken into smaller fragments (dimensions not recorded), depicting Zeus and Hera in the moment of sacrifice. Both deities are standing, with sceptres in their left hand. Zeus is holding a phiale in his right hand, above the altar, while Hera is presented in the same way, only holding her phiale above an eagle depicted with outstretched wings, as in the previous votive plate (**1**). Inscription above and below the relief (ht. of letters not recorded). Ligatures: HPA (l. 1), ΠΤ (l. 1), HN (l. 1, 2). This piece, not bought by the Museum of Ponišavlje, was described by P. Pejić (without illustration) and vanished thereafter in the commerce of antiquities. Cf. Пејић 2022, 12, no. 1. II AD.

Διὶ [καὶ] Ἥρᾳ Σουιδεπτηνο̣[ῖς]
relief
Σιλβανὸς Ἀπολλ[ωνί]ου εὐχήν.

1 Σουιδεπτήνω Pejić || **2** Ἀπολλ[ωνίδ]ου Pej.

The dedicator, of peregrine status, has a common Latin name (*Silvanus*) and a Greek patronymic (another Ἀπολλώνιος occurs in **10**).

3. Fragmentary dedication to Zeus and Hera

Fragment of the upper right corner of a rectangular marble plate (12 x 15 x 5 cm), depicting Zeus and Hera in the moment of the sacrifice (solid local work). Upper torso of the goddess standing, with a long veil on her head, falling down her back. It seems that on her head she has a cap, under which the veil is presented. She is dressed in a folded chiton and her oval face is realistically presented, with almond eyes and a small nose. In her raised left hand, Hera is holding a sceptre. On her right side, only part of Zeus' figure is visible: the god's raised left hand, in which he holds a sceptre. Analogous to other presentations of the divine pair sacrificing, we can presume that Zeus was presented as a mature bearded man, dressed in a chiton with a himation holding, as Hera probably too, a phiale in his right hand. Inscription above the relief (and certainly also below) (ht. of letters: 1–1.5 cm). Letters with small *apices*; maybe cursive *omega*. Pirot, Museum of Ponišavlje. Cf. Пејић 2022, 10–11, no. 2. II–III AD.



Museum of Ponišavlje (photo: M. Ilić)
Фото-документација Музеј Понишавља

[--- ---δ?]ῳ̣ρου Διὶ καὶ Ἥρᾳ
relief
[---------------------------------].

The dedicator, more likely of peregrine status, had perhaps a Greek patronymic, if the reading is [---]ῳ̣ρου; an alternative reading, however, could be [---]ο̣ρου (exactly as in **18**). The name of the dedicator was engraved in the first position, before the divine couple, whose names were more likely followed by a generic formula below the relief.

4. Fragmentary dedication of a son/daughter of Loukios

Two adjoining fragments of the right part of a marble plate (31 x 15 x 5 cm) depicting Zeus and Hera in a scene of sacrifice (elegant execution). The goddess is presented standing, veiled, dressed in a long chiton with a himation over her left shoulder, tied around the waist and falling down her legs. The facial traits on her elongated face show shallowly carved details, like emphasised round eyes, a bulb nose and thin lips. In her raised left hand, the goddess is holding a sceptre, while in her right hand she presumably holds a phiale towards the altar, which was on her right side. Beside Hera's right leg, an eagle is presented standing, with outstretched wings. One line of inscription preserved below the relief (ht. of letters: 1–1.5 cm). Pirot, Museum of Ponišavlje. Cf. Пејић 2022, 11, no. 3. II AD.



Museum of Ponišavlje (photo: M. Ilić)
Фото-документација Музеј Понишавља

[--------------------]
relief
[---] Λουκίο̣υ [---?].

The dedicator, most likely of peregrine status, had a common Latin patronymic (*Lucius*). The same name occurs in a dedication for Artemis (?) from the vicinity (Osmakovo), commanded by Λούκιος Τερεντι[ανοῦ?].[20]

5. Damaged dedication

Two adjoining fragments of the right part of a marble plate (32 x 16 x 4 cm) depicting Zeus and Hera (only the body of the goddess is preserved). Hera's head is, unfortunately, missing, but she is dressed in a long, folded chiton, tied under her breasts and falling down covering the goddess's legs. In her raised left hand, she holds a sceptre, while in her lowered right hand she is holding a phiale above the altar. In front of the altar, an eagle is standing with outstretched wings. Beside Hera's left leg, three nymphs are presented in a xoanon form.[21] Traces of an inscription above the relief, on two lines (ht. of letters: 1 cm), but very defaced, only an *alpha* being clearly visible; perhaps lunate *sigma*. Pirot, Museum of Ponišavlje. Cf. Пејић 2022, 11, no. 4. II–III AD (solid work; its certain linearity dates it probably in the 3rd c.).



Museum of Ponišavlje (photo: M. Ilić)
Фото-документација Музеј Понишавља

[--------------------]
relief
[-------------]..[-----]
[--- ε̣ὐ̣]χ̣αρ̣ι̣σ̣τ̣[ήριον?].

The name of the dedicator is erased and illegible. By the end of the second line, there is, possibly, a generic formula, almost illegible.

[20] *IMS* IV 80; *CCET* V 21 (photo Pl. XI). Other editors restored Τερεντι[ανός], which is unlikely.

[21] The image of the nymphs in a xoanon form is known on votive reliefs from the area of Philippopolis, but also on a votive icon from the *nympheum* in Tatarevo (Stojanov 1988, 721, nos. 21–22).

6. Dedication of [---]pyris (?)

Lower right part of a marble relief plate (12.5 x 16 cm) depicting Zeus and Hera (quite mediocre work). On the left side of the icon, a standing figure of Hera, dressed in a long, folded chiton. It remains unclear what attribute she had in her left hand, while in her right hand she holds a phiale above the standing figure of an eagle with outstretched wings. To the right of the eagle, a standing figure of Zeus was presented – now only identified by a part of a himation, which covered god's legs and his feet. There are no traces of the sceptre that the god usually holds (as with Hera too) in his left hand and it can be presumed that in his right hand Zeus held a phiale above the altar. Stylistically, the votive icon belongs to the type *LIMC* IV 2 (437 no. 11, 440 no. 22), particularly similar to the votive relief from Ovčarovo (dept. of Šumen), and to the votive icon found in the vicinity of Tatarevo (dept. of Haskovo).[22] Inscription less deeply engraved, below the relief (ht. of letters: 1 cm); small space between the words; empty space at the end of the line. Rectilinear *epsilon*, four-barred *sigma*; ligature HN. Private collection, thereafter *Hixenbaugh Ancient Art* (inv. no. 3125); Dana 2009, 191, no. 4, photo (*SEG* LIX 762). II AD.



After: Hixenbaugh Ancient Art 3125
Према: Hixenbaugh Ancient Art 3125

[-------------------]
relief
[---]π̣υ̣ρις *v* εὐχήν. *vac.*

[-]ο̣ιρις Dana 2009

In the first edition of this inscription, one of the authors of this paper read [-]ο̣ιρις, pointing to a Greek name, such as the male name [M]ο̣ῖρις, or the female name [M]ο̣ιρίς. However, such names are rare and the reading of the first part of the line is not clear on the photo; instead, it is much more likely to read [---].υ̣ρις, pointing thus to a Thracian name, either masculine (e.g. Σουρις or a name in -πουρις, variant of the series in -πορις), or, more probably, feminine, like the series of names in -πυρις (*OnomThrac* 280). Judging by the remaining parts of the letter, a *pi* is more likely before the *upsilon*, so we may suppose a name like Επτηπυρις (*OnomThrac* 180–181, about 15 occurrences) or, less likely, Γηπεπυρις (*OnomThrac* 187, about 5 occurrences). Moreover, such a name is attested in Turres on the epitaph of Επτεπυρις Τίτου, wife of Μάξιμος Δρολησυς, *bouleutēs* of Serdica (see *infra*).

7. Fragmentary dedication of a soldier (?)

Two adjoining fragments of the central part of a marble plate (dimensions not recorded) depicting Zeus and Hera. Between them stands an eagle with outstretched wings and its head turned towards the god. Although the heads of the deities are missing, we can presume that Zeus was presented as a mature bearded man, with long wavy hair. He has a himation over his left shoulder, which is tied on his waist leaving his torso naked and which falls in folds down the god's legs. Zeus holds a phiale in his left hand, pointed towards the bird, while in his right hand he



Museum of Ponišavlje (photo: M. Ilić)
Фото-документација Музеј Понишавља

[----------------------]
relief
[--- --- στρατ]ιώτης *vac.*
[--- Α]ὐγού̣[στης?].

[----Κωλ?]ωτης [---|--- Δεκεν?]του [εὐχήν?] Jovanović

---

[22] Stojanov 1988, 720 (no. 11) and 721 (no. 22).

probably held a sceptre. Left of the eagle, Hera is dressed in a chiton with a himation. Due to the traces of the veil on both her shoulders, it is assumed that the goddess wore a long veil falling down her back. She is holding a sceptre in her left hand and a phiale in her right hand, which was above the eagle's head. Beside her left leg, three nymphs are presented in the shape of a xoanon (cf. **5**). The presented linearity represents solid work (Zeus' torso, the folds of the lower part of Hera's himation). Elegant inscription, carefully cut on two lines below the relief (and certainly above). Letters with small *apices*; lunate *sigma*, cursive *omega*. Photo provided by Milorad Stojić to Aleksandar Jovanović. Јовановић 2008, 61–62, no. 14 (photo p. 70, fig. 14). III AD.

The restoration of the second line – the alternative reading [---]TOY[---] is less likely – is not assured, but if we prefer it, we may expect something like [--- --- στρατ]ιώτης | [λεγιῶνος γʹ (or τρίτης) Α]ὐγού[στης?], or the name of a *cohors* with the epithet *Augusta*. The dedicator was certainly a soldier, the quality of execution and of the gravure implying a larger cost that he was able to afford.

8. Erased dedication to Zeus and Hera *Souideptēnoi*

Six adjoining fragments of a rectangular marble relief plate (35 x 34 x 5 cm), with a curved upper board and small acroteria (missing upper part of its central and right side), depicting Hera and Zeus standing inside an aedicula, turned to each other with an altar between them. On the icon's left side, Zeus is presented dressed in a chiton with a himation over his left shoulder and holding a sceptre in his left raised hand. In his lowered right hand, held above the altar, he holds a phiale. Hera is standing in contrapposto, with her right leg in front and her weight on her left leg. The goddess is dressed in a himation, with her left hand holding a sceptre and a phiale in her right hand, also pointed towards the altar between her and Zeus. It seems that she had a long veil on her head, the ends of which are falling down the goddess' back. Unfortunately, the heads of both deities are missing, but judging by the modelling of deities' clothes, the details were modelled decently. The inscription is very faint; on the available photos, there is no possibility to recognise the letters. Јовановић 2008, 56, no. 2 (photo p. 68, fig. 3). II–III AD.



After: Jovanović 2008, p. 68, fig. 3
Према: Jovanović 2008, 68, сл. 3

[Διὶ καὶ Ἥρᾳ Σουιδεπτην]οῖς
relief
(illegible inscription on two lines).

1 [Διὶ καὶ Ἥρᾳ Ὀλυμπί?]οις Jovanović

9. Anepigraphic fragment depicting Zeus and Hera

Fragment of the right upper and central parts of a marble plate (22 x 30 x 5.5 cm), depicting Hera and Zeus standing. On the left side of the icon, Zeus, whose head is missing, was presumably represented as a bearded, mature man with wavy hair. He is dressed in a chiton with a himation over his left shoulder and falling from his waist downwards. As the left part of the icon is missing, the attribute in Zeus' left hand is unknown, however it was probably a sceptre; in his right hand, he holds a phiale above the altar. On Zeus' right side, almost a full figure of Hera is visible – a standing, veiled goddess, dressed in a chiton with a himation falling from her left shoulder and from around her waist down her legs. Her hair is water-waved in lines under the long veil falling down her back, while her facial traits are quite crude and masculine – small eyes, prominent nose and strong chin. Her neck is almost oversized and thick. In her left hand, Hera is holding a sceptre, which looks more like a long thick branch, and in her right she is holding an oval object (perhaps a sacrificial bread?). The stylistic characteristics of both divine figures and their details (Hera's neck, deities' forearms) imply a not so skilful local artisan

(maybe in the 3rd c.). Pirot, Museum of Ponišavlje. Cf. Пејић 2022, 10, no. 1. II–III AD.



Museum of Ponišavlje (photo: M. Ilić)
Фото-документација Музеј Понишавља

10. Dedication of Aur. Apollonios

Five adjoining fragments of a marble relief plate (28 x 27 cm), with small missing parts (icon's top, right side and left lower angle), depicting Hera and Zeus standing. The upper part of the icon is in the shape of an arc. Hera is presented on the icon's left side while Zeus is pictured on the right side, standing in contrapposto with his left leg in front and his weight on the right leg. The goddess is veiled, with a himation tied above the waist and a phiale in her right hand, lowered towards an eagle. Her facial traits are almost unrecognisable. On Hera's right side, an eagle with outstretched wings with his head turned towards Zeus is presented. The supreme god is pictured with wavy hair and a dense beard and a himation over his shoulder, tied around his waist falling down his legs. His facial traits are modelled crudely, with only his round eyes and mouth emphasised. In his left hand he holds a sceptre, while his right arm is lowered, holding a phiale above an altar. Altogether, a moderate iconographic scene, with visible linearity. Inscription above and under the relief (ht. of letters: 1 cm); letters with small *apices*; lunate *sigma*. Јовановић 2008, 56–57, no. 3 (photo p. 68, no. 2) (*AÉ*, 2017, 1266 *octies* 2 a). After 212 AD.



After: Jovanović 2008, p. 68, fig. 2
Према: Jovanović 2008, 68, сл. 2

Διὶ καὶ Ἥ[ρᾳ Σο]υιδεπτηνοῖς
relief
Αὐρ(ήλιος) Ἀπολ[λών]ιος εὐξάμενος ἀ[νέθηκεν].

1 [Ὀ]λυμπίοις Jovanović : [Σου]ιδεπτηνοῖς Šarankov

The dedicator was a recent Roman citizen and had a common Greek *cognomen* (cf. a patronymic Ἀπολλώνιος in **2**).

11. Fragmentary dedication to Zeus and Hera *Souideptēnoi*

Fragment of the upper part of a marble relief plate (dimensions not recorded; however, large format) with the upper board curved, preserving only the naked torso of Zeus, holding a sceptre in his left hand. One line of inscription above the relief (without ligatures). This piece, not bought by the Museum of Ponišavlje, was described by P. Pejić (without illustration). Cf. Пејић 2022, 12, no. 2. II–III AD.

[Διὶ κ]αί Ἥρᾳ Σουιδεπτ[ηνοῖς]
relief
[--------------------------------------].

12. Dedication of Hermogenes son of Markos

Eleven adjoining fragments of a marble relief plate with rounded top (*ca*. 35 x 28 cm; 33 x 27 cm, according to Jovanović), depicting the standing couple Zeus and Hera in the act of sacrifice (type *LIMC* IV 2, 437 no. 11, 440 no. 22). Zeus is presented on the right side of the icon, with long wavy hair, big eyes and a thick beard. Dressed in a himation, which is tied around his waist and falls down his legs, the god is holding a phiale in his right hand above an altar. An eagle with outstretched wings is standing between the deities. On Zeus' left side, Hera is presented with a rich, long veil on her head, dressed in a chiton with a himation. She is holding, in her raised left hand, a sceptre, while

in her right hand there is a phiale, right above an eagle's head. The stylistic characteristics imply a local work, however of a somewhat knowledgeable artisan, because of the attention given to the details (deities' facial traits and clothes); the fullness of the modelled scene and the present third dimension imply the 2nd century. Inscription deeply cut, but less accurate, above and below the relief (ht. of letters: 1–2 cm); the third line is centred. Irregular letters, some of them influenced by the cursive script; *alpha* without median stroke, *epsilon* both rectangular and lunate (and even without median bar), *theta* incompletely formed, *my* sometimes cursive, *xi* similar to a *zeta* (but with a zigzag), lunate (rectangular) *sigma*. Many ligatures: THN (l. 1), ΝΗΣ (l. 2), ΟΥ (l. 2), ΜΕ (l. 2). Private collection, thereafter *Gorny & Mosch. Giessener Münzhandlung. Auktion Kunst der Antike. 24. Juni 2008. 168*, 200, no. 534 (without photo); Јовановић 2008, 57, no. 5 (photo p. 69, fig. 5) (*AÉ*, 2017, 1266 *octies* 2 b); Dana 2009, 193, no. 8, photo (*SEG* LIX 766). II AD.



After: Gorny & Mosch, Auction 168, no. 534
Према: Gorny & Mosch, Auction 168, бр. 534

Δ[ι]ὶ καὶ [Ἥρᾳ Σουιδε]π̣τηνοῖς
relief
Ἑρμογένης Μάρκου εὐξάμενος
vac. ἀνέθ̣ηκεν. *vac.*

2 Μουκου Jovanović

The dedicator was of peregrine status. The Greek name Ἑρμογένης, quite frequent in Thrace (*LGPN* IV 126), is attested at Turres for the priest of a *koinon* worshipping *Theos epēkoos hypsistos* (see *infra*); the patronymic is a common Latin name, *Marcus*, attested as a patronymic of a villager Μουκκας near Turres (dedication from Suvodol, see *infra*).

13. Damaged dedication to Zeus and Hera *Souideptēnoi*

Fragment of the central upper part of a marble plate with curved pediment (*ca*. 15.2 x 18.5 cm), preserving only the head of Hera and the left hand of Zeus, holding a sceptre (type *LIMC* IV 2, 720–721 B.1). On the left side of the icon, only the head of Hera is preserved, presenting her as a standing, mature, veiled woman, with long wavy hair divided in the middle. The facial traits on Hera's oval face are carefully carved, presenting the goddess with almond eyes, a small nose and a round mouth. On her right side, we can see Zeus' raised right hand holding a sceptre. Analogous to similar iconographic scenes, it is probable that the relief presented standing supreme deities, dressed in a chiton and a himation, holding in their left hands sceptres and in their right hands phials above or pointed towards an altar. It is possible that an eagle with outstretched wings was pictured between the deities. Very faint traces of the inscription above the relief (ht. of letters: 1.5 cm); lunate *sigma*; ligature HP. Private collection, thereafter *Hixenbaugh Ancient Art* (inv. no. 3120). II–III AD (according to the plasticity of the scene, maybe 2nd century).



After: Hixenbaugh Ancient Art 3120
Према: Hixenbaugh Ancient Art 3120

[Διὶ καὶ] Ἥ̣ρ̣ᾳ̣ Σ̣ο̣υ̣ι̣[δεπτηνοῖς]
relief
[----------------------------------]

Only the name of Hera is vaguely legible (preceded by that of Zeus), followed by the beginning of the toponymic epithet.

14. Fragmentary dedication to Zeus and Hera *Souideptēnoi*

Upper part of a marble relief plate with sharp triangular pediment (18 x 26 x 5 cm), carefully executed; only the upper part survives, depicting Zeus with a sceptre in the left hand and Hera veiled (type *LIMC* IV 2, 437 no. 11; 440 no. 22). On the left side of the votive icon, only Hera's bust is preserved, presented as a mature veiled woman, with wavy hair showing under the veil, which falls down her back. Her oval face is carved carefully, presenting the deity with big almond eyes, a small nose and full lips. On her right side, the upper part of Zeus' head with hair is preserved, with his raised left hand holding a sceptre. His hair is curly and very meticulously carved, as are his hand, fingers and sceptre. It is a misfortune that only the upper part of this votive plate is preserved, because the partially preserved details, along with the inscription, imply high quality work of a skilful local artisan, who paid attention to the details of the iconographic scene, produced most probably in the 2nd century. Inscription deeply and elegantly cut, displayed on the pediment (ht. of letters: 1–1.5 cm). Some letters have *apices*; small *omikron*; *pi* with the horizontal bar exceeding the tops of the feet; four-barred *sigma*. The words were separated. Private collection, thereafter *Hixenbaugh Ancient Art* (inv. no. 3123); Dana 2009, 192, no. 5, photo (*SEG* LIX 763). II–III AD.



After: Hixenbaugh Ancient Art 3123
Према: Hixenbaugh Ancient Art 3123

[Διὶ *vac.* καὶ *vac.*] Ἥρᾳ *vac.* Σουιδεπτη̣[νοῖς]
relief
[---].

Only the name of Hera is preserved (most likely preceded by that of Zeus), followed by the toponymic epithet.

15. Dedication of Eptepouos, daughter of Iulios

Three adjoining fragments of a marble relief plate with triangular pediment (30 x 28 cm), depicting Zeus and Hera in the act of sacrifice. The whole figure of Zeus can be observed on the right side of the monument, where the god is presented dressed in a mantle falling off his left shoulder and tied around his waist, leaving his torso naked. Zeus' hair is wavy and long, divided in the middle, while the facial traits are unrecognisable except the beard. With his raised left hand, he is leaning on a sceptre, while he pours liquid on an altar on his right side, from a phiale held in his right hand. Hera is presented on the god's left side, dressed in a long, folded chiton tied under her chest. The goddesses' head is missing, but it seems that she was veiled; she is also holding a sceptre in her left hand and a phiale in her right hand above another altar, which is pictured between the two deities. Quite mediocre work, with present linearity. Inscription quite carefully cut above and under the relief (ht. of letters: 1–2 cm); on the pediment, the inscription is almost completely erased. *Pi* with the horizontal bar exceeding the tops of the feet; four-barred *sigma*. Јовановић 2008, 57, no. 4 (photo p. 68, no. 4). II AD.



After: Jovanović 2008, p. 68, fig. 4
Према: Jovanović 2008, 68, сл. 4

Διὶ κ̣[αὶ Ἥρᾳ Σουιδεπτηνοῖς?]
relief
Επτηπουος Ἰουλίου εὐχήν.

2 Τονου (?) Jovanović

The dedicator was of peregrine status. This is the second occurrence of such a Thracian feminine name, previously attested at Serdica, for Επτηπουος daughter of [Επ?]τηλας (*IGBulg* IV 1959; cf. *OnomThrac* 181),[23] moreover with a new spelling, cf. in our sanctuary Μουκαπουος (**30**, with a commentary of such names). The patronymic is a common Latin name, *Iulius*. Another compound name in Επτα- occurs twice in the dedication of villagers from Sarme, found at Suvodol, near Turres (see *infra*).

The same dedicator, Eptepouos daughter of Ioulios, appears in the following dedication (**16**), the name being differently spelled.

(II) Only one relief presents the divine couple Zeus and Hera enthroned (rather than other deities).

16. Another dedication of Eptepoueos, daughter of Iulios

Five adjoining fragments of a marble relief plate (33 x 30 cm) depicting Zeus and Hera enthroned[24]. The central and upper left part of the icon are unfortunately lost. The goddess, whose figure is almost completely preserved, is presented on the right side of the relief, with a narrow, high polos on her head, holding a sceptre (rather than a torch) in the left hand and a phiale in the right hand. The long wavy hair of the goddess is very meticulously divided in the middle and her oval face shows almond eyes and a small nose. She is holding a phiale above the altar on her right side and is dressed in a long chiton with a himation. On the goddess's left side, a lower part of other deity's body, dressed in a long mantle, is presented, unfortunately without the traces of any attribute in the hands. Inscription above (missing or faint) and under the relief (ht. of letters: 1–1.5 cm), quite accurate. Rectilinear *epsilon*, small *omikron*, four-barred *sigma*. Ligature NE; small *upsilon* added above the *omikron* at the end of the last line. Јовановић 2008, 59, no. 9 (photo p. 69, no. 9). II AD.



After: Jovanović 2008, p. 69, fig. 9
Према: Jovanović 2008, 69, сл. 9

[---]
relief
κατ' εὐχὴν Επτ̣[η]π̣ουεος Ἰουλίο`υ´.

2 κατ'εὐχήν Εσ[καδ?]ου Σοζίουμου (?) Jovanović

The same dedicator, Eptepouos daughter of Ioulios, appears in the previous dedication (**15**). In this second dedication, the form of the name is *hapax*, but the reading is assured[25]; this spelling must be a variant of the forms -πουιους/-*puius,* attested for another compound name of the same series, Μουκαπουος (see **30**, comm.).

(III) Another main group, well-represented in the Belava sanctuary, is that of Zeus and Hera driving in a quadriga.

17. Dedication of the *bouleutēs* Heraklides, son of Dizas

13 partly joining fragments of a marble relief plate (*ca*. 55 x 50 cm; according to Jovanović, 60 x 50 cm) with rounded top, depicting Zeus and Hera driving in a quadriga. Zeus' figure, which is presented on the left of Hera, is almost fully preserved, thus allowing us to observe a mature image of the god, with longer hair and beard standing, dressed in a himation tied around his waist, in the coach. Only the

[23] Another possible occurrence, Επτ[α]πυς at Herakleia Sintike (*IGBulg* IV 2325, useless photo Pl. 159), is in fact a wrong reading of Dimităr Dečev (followed by Georgi Mihailov) for θρεπτ[α]|ρίυς, see the correction of Sharankov 2016, 343–344. Instead, the name restored as Επταιπ̣ο̣υ̣ (Gen.) by Sharankov 2007, 431–432, no. 7 (photo p. 431, fig. 5), and 434–435, no. 11, in a dedication to Hera from Philippopolis, is a wrong reading for Επται[λ]ο̣υ̣ (Gen.), that is Επταιλας, spelling variant of the masculine name *Eptala* (see *OnomThrac* 180).

[24] Rather than other deities, such as Demeter and Persephone (Kore) for Jovanović (Јовановић 2008, 59) or Pluto and Persephone.

[25] It is extremely rare to find the banal formula κατ' εὐχήν followed by a Genitive: Ἀγαθήνωρ Πόσσειος ὁ | καὶ Δαδας εὐχαριστήριον | κατ' εὐχὴν τοῦ πατρός (*IGBulg* I^2 286, Galata nearby Odessus); accordingly, the name in our dedication is in Nominative.

almond eyes are noticeable of his facial traits, while Zeus is holding the sceptre in his right raised hand. On the god's right side, Hera is shown dressed in a long, folded chiton. Unfortunately, only the lower part of goddess's figure is preserved – her head and possible attribute that she might have held in her hands, are missing. The horses harnessed in the quadriga are bolting and the first horse (whose figure is the most prominent in the icon) is stepping with his front leg on the altar in front of him. Beside the altar, part of a large snake is presented. Certain details in the icon, like the wheels of the quadriga, are solidly modelled, but also present is linearity and the moderate skilfulness of the artisan. Elegant inscription, carefully cut above and under the relief (ht. of letters: 0.5–1.5 cm). Letters with *apices*; small *omikron*, *xi* similar to a *zeta* (but with a zigzag), lunate (rectangular) *sigma*. The first line, providing the introductory formula, was engraved in smaller characters (0.5 cm) in the middle of the pediment. Many ligatures: HN (l. 2), HΣ and ME (l. 3). Interponction after Δ(ι)ί (l. 2) and signalling the abbreviation β(ουλευτής) (l. 3). Private collection, thereafter *Gorny & Mosch. Giessener Münzhandlung. Auktion Kunst der Antike. 24. Juni 2008. 168*, 200, no. 535



After: Gorny & Mosch, Auction 168, no. 535
Према: Gorny & Mosch, Auction 168, бр. 535

Ἀγα̣[θῆ̣ Τύχη̣·]
Τ̣[οῖς κ]υρίοις Δὶ • κ̣[αὶ Ἥρα̣ • Σο]υιδ̣ε̣πτ̣η̣ν[οῖς]
relief
Ἡρακλίδης Διζου • β(ουλευτὴς) • εὐξάμενο[ς]
ε̣ὐ̣χ̣αρ̣[ιστήριον].

2 Επτην[οις?] Jovanović || **3** Δι[ζουλ?]ου Β[ειθ?]αρενο[---] χειονης Jov. : or Χειόνης (?) : or [ὑπὲ]ρ̣ Χειόνης Chaniotis : εὐξάμενο[ς] ε̣ὐ̣χ̣αρ̣[ιστήριον] Χειόνης? Shar.

(without photo); Јовановић 2008, 58, no. 6 (photo p. 69, fig. 6) (*AÉ*, 2017, 1266 *octies* 2 c); Dana 2009, 194, no. 9, photo (*SEG* LIX 767). II AD.

Our disposition is different from that in the photos given in the papers published in 2008 and 2009; we placed differently the fragment bearing the second part of l. 2, and, most importantly, we removed another inscribed fragment that belongs, in fact, to another plate (**28**).

The dedicator has a common Greek name, spelled here with the monophthongisation of /*ei*/ in Ἡρακλίδης;[26] the patronymic is native, Διζας (the same as in **21**), a very frequent Thracian anthroponym (*OnomThrac* 146–151). Another patronymic Διζας and a compound name in Διζα- occur in the dedication found at Suvodol, near Turres (see *infra*). Unlike other dedicators in the Belava sanctuary, Herakl(e)ides precises his status, as he was *bouleutēs*[27] of an unnamed city – certainly Serdica, since Turres belonged to that territory. Another *bouleutēs* of Serdica attested in Turres is Maximos, son of Droles, β(ουλευτὴς) Οὐλπίας Σερδικῆς, the letter B having a line above in order to mark the abbreviation (see below). The same abbreviation, with a *beta* having a line above, between two points, occurs on a fragmentary relief found in Nozrina near Aleksinac, in the Margus valley, between Horreum Margi and Naissus (that is, on the territory of Moesia Superior), dedicated by Ἡρόδοτος Ρασδου • β(ουλευτής) • (Thracian patronymic).[28] The onomastics of other *bouleutai* in Thrace clearly shows that the native component in this class of notables was quite important.

---

[26] This spelling occurs sporadically in Thrace (Slavova 2004, 39), see *IGBulg* IV 2072 (Pautalia), 2023 (terr. of Serdica); V 5484 (Batkun). We may mention a Διζ[ας] Ἡρακλίδου at Batkun (terr. of Philippopolis, dedication to Asclepius, *IGBulg* III 1175 + V 5484); a homonymous Herakleides raised the epitaph of his father Dizas, son of Seutheilas, at Ivanjane-Banja (terr. of Serdica, *IGBulg* IV 2011). These names are, however, too frequent to propose any identification.

[27] Among the epigraphic evidence, almost all votive, of Thrace, this title is noted completely (quite often), but also diversely abridged, such as βουλ(ευτής), βου(λευτής) and, as in our case, β(ουλευτής), most often in the western part of the province: *IGBulg* IV 2010, 2125 (restored), 2213; V 5790, 5792, 5803, 5814–5816.

[28] Plemić, Vasiljević 2022, 10–14 (photo p. 11, fig. 2); the relief depicts a standing god in a chariot, naked but with a chlamys flattering behind. The upper part of the god, maybe with one or more attributes, is missing, and his identification by the editors as Helios/Apollo is questionable; another depiction of Zeus is more likely.

18. Fragmentary dedication to Zeus and Hera *Souideptēnoi*

Six partly joining fragments of a rectangular marble relief plate with the upper part curved (*ca*. 33 x 50 cm), depicting Zeus and Hera driving in a quadriga. On the right side of the votive icon, only the figure of Zeus is preserved, showing a standing mature man, with long wavy hair and a dense beard. His facial traits are carefully carved, like his hair, with almond eyes, a large nose and small lips. He is dressed in a mantle falling over his left shoulder and tied around his waist, which leaves his torso naked. In his raised right hand, Zeus is holding a thunderbolt, while a quadriga is presented schematically with a wheel divided inside into four parts. We can presume that on the god's right side, Hera was presented, probably similarly as in analogous iconographic scenes – as a standing veiled woman, holding a sceptre in one hand and a phiale in the other hand. In the upper left angle of the icon, an eagle is partially preserved, while in the lower left angle of the relief horses bolting in front of a large crawling snake are pictured. Another fragment (not bought by the Museum of Ponišavlje), described by P. Pejić, depicts an eagle with outstretched wings, matching with the rest of the first line of the inscription. Inscription elegantly cut, displayed above and below the relief (ht. of letters: 1–2.5 cm). Letters with *apices*; elegant *delta*, small *omikron*, *omega* in shape of W with vertical extremities. Private collection, thereafter *Gorny & Mosch. Giessener Münzhandlung. Auktion Kunst der Antike. 24. Juni 2008. 168*, 199, no. 533 (without photo); Јовановић 2008, 58–59, no. 7 (photo p. 69, no. 7); Dana 2009, 193, no. 7, photo (*SEG* LIX 765); for the joining fragment, cf. Пејић 2022, 12, no. 3 (without illustration). II–III AD (the plasticity and the third dimension present in the modelling of the relief suggest the 2nd century).



After: Gorny & Mosch, Auction 168, no. 533
Према: Gorny & Mosch, Auction 168, бр. 533

Δ̣ιὶ *v* καὶ Ἥ[ρ]ᾳ Σουιδε[πτηνοῖς]
relief
[--- ---]όρου δῶ̣ρον. *vac.*

---

1 [κυρίοις Δ]ιί καί Ἥρ[α Επτηνοις?] Jovanović ||
2 [--- Β]ρουθ[ενις? δω]ρον Jov.

Only the end of the patronymic of the dedicator is preserved (cf. a similar ending in **3**).

19. Fragmentary dedication to Zeus and Hera *Souideptēnoi*

Three adjoining fragments of the upper part of a marble plate (dimensions not recorded) with curved top, depicting Zeus and Hera driving in a quadriga. The central and lower left part of the icon are missing (the photo is, moreover, partial), as are the presentation of the quadriga and the full figures of Zeus and Hera. In the centre of the icon, a carefully modelled head of Zeus can be observed – the supreme god is presented as a mature, bearded man with long wavy hair divided in the middle and a dense beard, with oval eyes, a prominent nose and a small mouth. In his right hand, Zeus holds a thunderbolt that enters the upper dedication field. We can presume that, analogous to other presentations on icons from the Belava sanctuary, Zeus was dressed in a long mantle that was falling from his left shoulder, leaving his torso naked and tied around his waist. On Zeus' right side, Hera is depicted standing, veiled and dressed in a long chiton with a himation. Her facial traits comprise carefully shaped almond eyes and a small nose. On Zeus' left side stands an eagle with outstretched wings and its head turned towards the god, while on the left of the bird Hermes, small-sized, looks as though he is leading the quadriga. The ever-youthful god is presented with short wavy hair and a finely modelled face, naked with a himation around his neck and left shoulder, holding a *caduceus* in his left hand and a *marsupium* in his right hand. Under Hermes' figure, the heads and the upper parts of four horses are presented in profile, very meticulously modelled. Inscription quite carefully cut above the relief (and certainly under). Elegant *alpha* and *delta*; *theta* divided by a horizontal bar; small *omikron*; *pi* with the horizontal bar exceeding the tops of the feet; lunate (rectangular) *sigma*. Ligature HP; interponction after the name of Zeus. Photo provided by Milorad Stojić to Aleksandar Jovanović. Јова-

новић 2008, 61, no. 13 (photo p. 70, fig. 13). II–III AD (the details of the figures, such as the hair and the clothes, as well as those of the eagle and horses, suggest the second part of the 2nd century).



After: Jovanović 2008, p. 70, fig. 13
Према: Jovanović 2008, 70, сл. 13

[Ἐπιφανεστά?]τοις θεοῖς Διὶ • καὶ Ἥρᾳ Σουιδεπτ[ηνοῖς]
relief
[---].

τοῖς θεοῖς Διί καί Ἥρα Τουιδετ[ηνοις?] Jovanović

The disposition of the inscription on the top of the curved plate suggests not the superfluous τοῖς, but the superlative epithet [ἐπιφανεστά]τοις, divided by the thunderbolt.

20. Fragmentary Latin dedication of a legionary

Left and central part of a curved marble plate (23 x 17 cm), depicting Hera and Zeus driving in a quadriga (type *LIMC* IV 2, 438, nos. 16–17 and esp. 440, no. 26). Zeus appears turned to his left side, as a mature bearded man with long wavy hair. Over his left shoulder, a long mantle is thrown, which leaves his torso naked. Zeus' facial traits are indicated, as is the musculature of his torso. His left arm is holding a bridle and an eagle with outstretched wings presented frontally is standing on his arm. In his raised right hand, Zeus is holding a thunderbolt, which enters the dedication field. On his right side, Hera is presented as a mature woman with a long veil on her head, dressed in a long chiton tied under her breasts and a himation over her left arm and waist. Her hair is divided in the middle and covered with a long veil, while her facial traits are only recognisable in the context of the shallowly carved eyes and mouth. She holds in her left hand a sceptre, and a phiale in her right hand. The closest iconographic analogy can be found in a marble relief found in Krivodolska Mahala (dept. of Vraca).[29] Inscription above (almost completely erased, maybe on two lines) and below the relief (ht. of letters: 0.7–1 cm). Private collection, thereafter *Hixenbaugh Ancient Art* (inv. no. 3122); Dana 2009, 194–195, no. 10, with photo (p. 195) (inscription not recorded in *AÉ*). II–III AD (judging by the well-presented body proportions of the deities and the carefully carved details, like the wheel of the quadriga, this relief presents a solid work of a local artisan, probably produced in the second half of the 2nd century).



After: Hixenbaugh Ancient Art 3122
Према: Hixenbaugh Ancient Art 3122

[I(ovi) O(ptimo) M(aximo) (et) Iunoni Reginae?]
relief
[--- ---]es, miles ḷ[eg(ionis) ---]
[votu]ṃ posụit [---?].

[29] Stojanov 1988, 722, no. 26, ph. 26 (end of the 2nd – beginning of the 3rd c.).

This damaged plate is the only Latin inscription unearthed in the Belava sanctuary. The heading is unfortunately too damaged to decipher the Latin names and epithets of the divine couple. In the missing part below the relief was an abridged *gentilicium*; the soldier, serving in an unknown legion, had a Latin (e.g. *Vales*), Greek of Thracian (e.g. *Seuthes*) *cognomen*. His quality of *miles* matches the choice of Latin for the dedication; his legion could more likely be from Lower Moesia (*I Italica* or *XI Claudia*), without excluding Upper Moesia (*IV Flavia Felix* or *VII Claudia*), or even another province (cf. **7**), as happens with veterans returning home. The sanctuaries of Western Thrace, for instance, the cult place of Zeus and Hera from Caristorum/Kopilovci (terr. of Pautalia), comprised a majority of Greek inscriptions, Latin texts being always in the minority.[30] Once more, the relationship between the use of Latin and the membership in the Roman army is not fortuitous.

21. Fragmentary dedication of [---]on, son of Dizas

Fragment of the lower central part of a marble plate (15.5 x 21 cm) depicting Zeus and Hera driving in a quadriga (type *LIMC* IV 2, 438, nos. 16–17 and especially 440, no. 26), with the partial presentation of a horse and the legs of three other horses. Judging by the preserved details, like the wheel of a quadriga and the horse's attitude and carved hoof, the artisan was quite skilful. Inscription elegantly cut, displayed above (in the missing part) and below the relief (ht. of letters: 1–2 cm); elegant *delta* and *zeta*, small *omikron*, *omega* in shape of W with vertical extremities; the three words were spaced. Ligature ΩN. Private collection, thereafter *Hixenbaugh Ancient Art* (inv. no. 3127); Dana 2009, 191, no. 3, with photo (*SEG* LIX 761). II AD (also because of the plasticity of the iconographic scene).



After: Hixenbaugh Ancient Art 3127
Према: Hixenbaugh Ancient Art 3127

[Διὶ καὶ Ἥρᾳ ---?]
relief
[---]ων *vac.* Διζου *vac.* ε̣[---].

The dedication was raised by the son (with a suffixed name, maybe Greek) of a certain Διζας, a common Thracian name (see another occurrence in **17**, and comm.). After the patronymic, we may have a formula such as ε̣[ὐχήν]/ε̣[ὐχαριστήριον].

22. Fragmentary dedication of Aur. Maximos and another person

Left lower corner of a marble plate (dimensions not recorded) depicting Zeus and Hera driving in a quadriga. On the left side of the icon, Zeus is presented standing, presumably similarly to analogous scenes (as a mature, bearded man, with a mantle over his left shoulder and waist, holding a sceptre in one hand). On Zeus' right side, Hera is standing, presumably presented as a veiled woman dressed in a long chiton, holding a sceptre and perhaps a phiale in her hands. The details are executed with knowledge, depth



After: Jovanović 2008, p. 70, fig. 12
Према: Jovanović 2008, 70, сл. 12

[---]
relief
Αὐρ(ήλιος) • Μάξιμος Τα̣[--- καὶ Αὐρ(ήλιος)? --- Ἑρμο?]-
vac. γένου̣[ς? --- *vac.*].

1-2 Αὐρ[ήλιος] Μάξιμος Τα[--------]|ΓΕΝΟΙ[-----] Jovanović : Αὐρ(ήλιος) Μάξιμος Τα[ρσου? καὶ --- Ἑρμο]|γένου̣[ς? ---] Šarankov (*AÉ*)

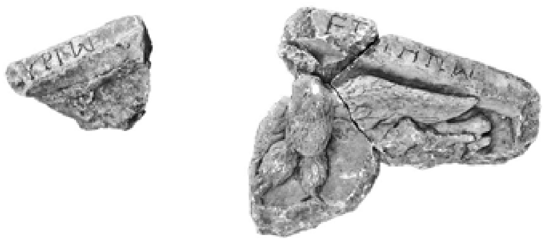
[30] At Caristorum, compared to dozens of Greek dedications, only two are in Latin: *IOM Caris[toreno] Faedius Sabin[us ex voto]* (*AÉ*, 1915, 90); *[IOM et] Iunoni Reg[inae --- --- ex v]oto posuit* (*AÉ*, 1915, 91). Similarly, the sanctuary of Telerig (Lower Moesia) provided only two Latin texts for about 50 Greek dedications (Alexandrov, Dana 2020).

and plasticity (which is implied by details like Hera's folded dress). Inscription below the relief (and more likely above), on two lines (l. 2, in smaller letters), carefully executed. Small *omikron*; *xi* like a reversed *zeta*; lunate (rectangular) *sigma*. Interponction between the *nomen* and the *cognomen*; the abbreviation of the *nomen* is signaled by a line above. Photo provided by Milorad Stojić to Aleksandar Jovanović. Јовановић 2008, 60–61, no. 12 (photo p. 70, fig. 12) (*AÉ*, 2017, 1266 *octies* 2 d). After 212 AD.

A. Jovanović's readings were improved by Nikolaj Šarankov (in *AÉ*). A recent citizen after the *Constitutio Antoniniana*, *Aur.* *Maximus* was maybe better identified by a native (?) patronymic; thereafter, in the missing part, was certainly named a second dedicator, son of [Ἑρμο?]γένης. Accordingly, at the beginning of the first line, the abbreviation could stand for both dedicators, so Αὐρ(ήλιοι). Another bearer of the name *Maximus* in Turres is a son of Droles, *bouleutēs* of Serdica (see below); for another Ἑρμογένης in our sanctuary, see the dedication **12**.

23. Dedication to Kyrios Zeus *Souideptēnos*

Three adjoining fragments and another one from the right side, from a marble plate with a triangular pediment (ht. 25 cm). The central part depicts an eagle standing, with outstretched wings. The feathers of the bird, like its figure, are very carefully carved in detail. Under the eagle's left wing, a horse's head can be observed, probably presented also under the bird's right wing (that part of the monument is missing). This detail allows us to presume that on the votive relief a scene of Zeus and Hera driving in a quadriga was presented. Inscription elegantly cut above (and certainly below) the relief (ht. of letters: 2–3 cm). Letters with *apices*; *pi* with the horizontal bar exceeding the tops of the feet; *omega* in the shape of W. Vacant space between words. Јовановић 2008, 59, no. 8 (photo p. 69, no. 8). II–III AD.



After: Jovanović 2008, p. 69, fig. 8
Према: Jovanović 2008, 69, сл. 8

[Κ]υρίῳ *vac.* [Διὶ *vac.* Σουι]δ̣επτηνῷ̣
relief
[--].

1 κυρίω Επτηνω Jovanović

Our disposition is different from that of the first editor, because of the space needed for the name of Zeus and the beginning of the toponymic epithet. The dedication was made only to Zeus, as proven by the singular form of the epithet.

24. Anepigraphic relief depicting Zeus and Hera in a quadriga

Fragment of a marble relief plate (18 x 25 cm), with only the central part of a scene preserved with Zeus and Hera driving in a quadriga (cf. type *LIMC* IV 2, 721 B.2). On the left side of the icon is a naked torso of Zeus with a mantle over his left arm and waist, which falls downwards the god's legs. The deity is slightly turned towards his left side, which implies that the quadriga was turned to the left side. Judging by the position of his right hand, which is raised, analogous to similar iconographic scenes on other votive icons, Zeus probably held a thunderbolt. The goddess Hera is standing on Zeus' right side, dressed in a long chiton, tied under her breasts, with a himation. In her left hand, she is holding a sceptre, while in her right hand a part of a phiale is presented. Iconographic characteristics are analogous with votive reliefs from Mogilovo (dept. of Stara Zagora), Ratiaria, Suhače (dept. of Vraca) and Basarbovo (dept. of Ruse).[31] Private collection, thereafter *Hixenbaugh Ancient Art* (inv. no. 3128). II–III AD (stylistic characteristic of the scene suggest mediocre local work; in the modelling of Zeus' torso a certain plasticity is present; judging by Hera's figure linearity, a suggested date is in the 3rd century).



After: Hixenbaugh Ancient Art 3128
Према: Hixenbaugh Ancient Art 3128

[31] Stojanov 1988, 721, nos. 16–19.

25. Anepigraphic relief depicting Zeus and Hera in a quadriga

Fragment of a marble plate (19 x 13 cm), preserving the body without the head of Zeus brandishing his thunderbolt (cf. type *LIMC* IV 2, 721 B.2). Only the partial figure of Zeus is preserved, from which we can presume that the god was turned towards his left side and probably pictured as a mature bearded man, with naked torso and a himation that falls from his left shoulder, wrapped around his waist and falling down his legs. The deity was probably holding bridles in his left hand, while in his raised right hand a thunderbolt was figured. On his right side, a fragment of Hera's left hand is visible, presumably holding a sceptre, analogous to similar iconographic scenes. Private collection, thereafter *Hixenbaugh Ancient Art* (inv. no. 3121). II–III AD (clear linearity and artisan's inattention to iconographic details suggest the 3rd c.).



After: Hixenbaugh Ancient Art 3121
Према: Hixenbaugh Ancient Art 3121

26. Anepigraphic relief depicting Zeus and Hera in a quadriga

Fragment of a marble relief plate (*ca*. 11 x 11.5 cm) preserving the bust without the head of Zeus brandishing a thunderbolt (cf. type *LIMC* IV 2, 721 B.2). A small part of the iconographic scene of the supreme divine couple driving in a quadriga is presented – the torso of Zeus with a mantle over his left shoulder. Traces of the god's hair are preserved, as is his raised right hand in which he holds a thunderbolt. Also, a part of a sceptre that Hera held in her left hand can be recognised. By the position of the god's body, slightly turned to his left side, we can presume that the scene was analogous to those mentioned in the votive reliefs above. Private collection, thereafter *Hixenbaugh Ancient Art* (inv. no. 3126). II–III AD (the mediocre quality of the iconographic details, such as the unskilfully carved arm of the god and the himation, or the emphasised linearity present in Zeus' torso, suggest the 3rd century).



After: Hixenbaugh Ancient Art 3126
Према: Hixenbaugh Ancient Art 3126

27. Anepigraphic relief depicting Zeus and Hera in a quadriga

A small fragment of a marble relief plate (dimensions not recorded), depicting the horses from a scene with Zeus and Hera in a quadriga. We can observe a prancing horse with the front legs of another three horses harnessed to a quadriga. This scene is analogous to already described presentations of Zeus and Hera driving in a quadriga, as standing deities holding their usual attributes (sceptres and phials) in their hands. Photo provided by Predrag Pejić to Aleksandar Jovanović (the purchase by the museum of Pirot was not realised). Јовановић 2008, 60, no. 11 (photo p. 70, no. 11). II–III AD (quite schematic and simply performed presentation, without paying attention to the details, suggesting the 3rd century).



After: Jovanović 2008, p. 70, fig. 11
Према: Jovanović 2008, 70, сл. 11

28. Fragmentary dedication on behalf of Chione

One fragment (*ca*. 20 x 10 cm) from the lower right corner of a marble relief plate depicting Zeus and Hera on a quadriga. The fragment was photographed together with more fragments from a different relief (**17**) and published with the inscribed fragments of that plate. However, the iconography is slightly different (the shape of the snake) and also the palaeography (*epsilon* without *apices*). On the fragment, a partial image of a snake is visible with an altar, in front of which it coils; and the front leg of a horse. Inscription above (lost) and below the relief (ht. of letters: 1–2 cm); small *omikron*, lunate (rectangular) *sigma*. Ligature ΝΗΣ. Private collection, thereafter *Gorny & Mosch. Giessener Münzhandlung. Auktion Kunst der Antike. 24. Juni 2008. 168*, 200, no. 535, without photo); Јовановић 2008, 58, no. 6 (photo p. 69, fig. 6) (*AÉ*, 2017, 1266 *octies* 2 c); Dana 2009, 194, no. 9, photo (*SEG* LIX 767). II–III AD (the plasticity of the modelling and the carefully performed details suggest the second half of the 2nd century).



After: Gorny & Mosch, Auction 168, no. 535
Према: Gorny & Mosch, Auction 168, бр. 535

[---]
relief
[--- --- ὑπὲρ τῆς θυγατρὸς?] Χειόνης
[---?].

2 [---]χειονης Jovanović : Χειόνης? Sharankov (?) : [ὑπὲ]ṛ Χειόνης sugg. Chaniotis (*SEG*)

According to Nikolaj Šarankov, the fragment with the Genitive form Χειόνης could have belonged to plate other than **17**. This is now certain, since the shape of the snake is not the same on the two reliefs, and especially because the *epsilon* is without *apices* on this small fragment, while the *apices* are so neat in the dedication **17**. The present dedication was made on behalf of the daughter (or wife) Chione ("Snow"). This name is borrowed from a mythological figure, that is the daughter of Boreas and the mother of Eumolpus (son of Poseidon); Boreas and Eumolpus were associated by the ancient literary tradition with Thrace.[32] The name Χιόνη occurred previously three times in Thrace (*LGPN* IV 356), as well as an [ἀρχι]έρεια in Serdica (*IGBulg* IV 1949). A fifth occurrence of this name in Thrace was recently provided by a dedication to Zeus and Hera from the sanctuary at Kozi Gramadi (terr. of Philippopolis).[33]

(IV) Only one relief presents Zeus alone, standing.

29. Damaged dedication of Bithys (?)

Three adjoining fragments of a marble relief plate (26 x 17 x 5 cm) depicting Zeus. The supreme god is pictured standing in contrapposto, with his weight resting on his left leg and a slightly forward, bent at the knee, right leg. His wavy hair is divided in the middle, but besides the beard, the traits of his face are hard to distinguish. Zeus' upper part of the body is naked, with carefully modelled musculature and a mantle over his left shoulder, tied around his waist, covering the god's legs. He holds a sceptre in his left bent upwards hand, while in his right hand he holds a phiale above the altar. Beside his left leg, an eagle is standing (only the contours of the bird's lower part are barely visible), presumably with his wings outstretched. Geographically, the closest analogy would be the votive relief of Zeus in the act of sacrifice from Poganovo (of much better iconographic quality).[34] The iconographic details imply a mediocre work of a not so skilful local artisan, while stylistically

[32] Boreas, as the Greek north wind, was associated with cold and winter and presumed to originate from Thrace (Athanassakis, Wolkow 2013, 186). Eumolpus was the son of Poseidon and Chione, the daughter of Boreas and Oreithyia; after his banishment, he escaped to Thrace.

[33] Hristov 2014, 149 and 183, FIN 192, where the reading must be Χιόνη Αθυ[ος?].

[34] Вулић 1934, 60, no. 69; now in the National Museum in Niš (inv. no. 45/R; dim. 27.5 x 17.5 x 3 cm). This relief presents the god standing in a contrapposto position, with his right leg slightly forward and the weight of his body resting on his left leg. Zeus is presented frontally, as a mature, bearded man with a mantle over his left shoulder wrapped around his waist and falling down to his feet; he is holding a sceptre in his raised left hand, while in his lowered right hand he holds a phiale above an altar. The iconographic details, like the emphasised muscularity of Zeus' naked torso, skilfully carved facial traits and the attention with which the proportion of the presentation is modelled, imply a very knowledgeable artisan and a date in the 2nd century. We would like to express our gratitude to our colleague Vesna Crnoglavac, the director of the National Museum in Niš, for her kindness in providing us with a photo.

the presence of linearity and a certain degree of rigidity suggest a later date (however, the dedicator has a peregrine status). Traces of letters (ht. *ca*. 1.5 cm). Јовановић 2008, 55–56, no. 1 (photo p. 68, fig. 1). II AD.



After: Jovanović 2008, p. 68, fig. 1
Према: Jovanović 2008, 68, сл. 1

[Κυ]ρίῳ [Διὶ --- ?]
relief
Β̣ι̣θ̣υ̣ς ἀ̣ν̣έ̣θ̣[ηκεν]
vac. ε̣ὐ̣χ̣αρ̣[ιστήριον].

1 [Τῷ κυ]ρίῳ [Διί] Jovanović || **2** [Α]θυ[ς] ἀνέθ[ηκεν] Jov.

It is impossible to confirm in the photo the readings of A. Jovanović. According to his proposition and the traces visible in unclear photos, our suggestion is slightly different, but not assured. The dedicator, of peregrine status, was identified only by his anthroponym, the most common Thracian name (*OnomThrac* 40–58); this name also occurs for a villager in the dedication of Suvodol (see *infra*).

Similar plates depicting Zeus alone, most often with an eagle to the right of his feet, are known in Lower Moesia, e.g. *IGBulg* II 489 (Pl. 3), near Mezdra, and *IGB* V 5315 (Pl. 49) in Draganovec; and in Thrace: Philippopolis (*IGBulg* III.1 965–966, Pl. 37–38); Potop-Jordankino, terr. of Serdica (*IGBulg* IV 1984, Pl. 33), Rosoman, terr. of Pautalia (*IGBulg* IV 2114, Pl. 83), Caristorum/Kopilovci, terr. of Pautalia (*IGBulg* IV 2166 and 2176, Pl. 98 and 100), and very close to Pirot, in Caribrod/Dimitrovgrad.[35] We may add a similar rectangular marble plate of very good execution, presumably from Western Thrace (antiquities market), with a curved top (27.7 x 19.3 cm), depicting only Zeus and engraved Διὶ Δειν̣ε̣ιλας | Δραλου εὐχήν.[36]

(V) Again, only one relief depicting Hera alone, standing.

30. Dedication of Moukapouos, daughter of Papas

Lower part of a rectangular marble plate (*ca*. 13 x 21 cm) depicting Hera alone, standing. We remark on the fact that her body is dressed in a long, folded chiton; its position implies that she is turned to her right side, presumably holding a phiale in her right hand, since an altar is present on the goddess's right side. The closest iconographical analogies can be found in a marble relief from Timacum Minus/Ravna[37] and a votive relief discovered in the territory of Philippopolis (now at NAIM, Sofia).[38] Mediocre local work with obvious linearity. Inscription engraved above (lost) the relief and below, on two lines. Letters cut less accurately (ht. of letters: 1–1.5 cm), but with *apices*; smaller *omikron*, larger *pi*, lunate (rectangular) *sigma*, *upsilon* of various shapes. Ligature HT. Private collection, thereafter *Hixenbaugh Ancient Art* (inv. no. 3124); Dana 2009, 189–191, no. 2, photo (*SEG* LIX 760 = *AÉ*, 2017, 1266 *octies* 2 e). II AD.

The dedication was made on behalf of Moukapouos, daughter of Papas, of peregrine status, through the intermediary of her son Valens. This Thracian compound female name (*OnomThrac* 233–234) is every time attested with different Greek and Latin spellings for the second element: Μουκαπουιους Βάλεντος in Burdapa (terr. of Philippopolis, *IGBulg* III.1 1354), so, daughter of *Valens*); Μουκαποουις in Viden (terr. of Augusta Traiana, *IGBulg* III.2 1736), daughter of

[35] Вулић 1934, 60, no. 69 (photo); Вулић 1941–1948, 306, no. 71 (photo).

[36] *Hermann Historica* (Auktion 65, 15–16 Oct. 2012, no. 339); see Dana 2014, 188–189, no. 6 (photo fig. 4). Cf. also an anepigraphic relief, of less accurate execution, depicting Zeus and Hera (*Hermann Historica*, Auktion 63, 26 Oct. 2011, no. 1745).

[37] Вулић 1941–1948, 308, no. 80.

[38] Stojanov 1988, 720, no. 3.



After: Hixenbaugh Ancient Art 3124
Према: Hixenbaugh Ancient Art 3124

[Ἥρᾳ ------------?]
relief
Μουκαπουος Παπου
vac. διὰ τοῦ ὑοῦ Οὐάλητο̣[ς].

1 or Πάπου

Μουκαπορις; *Mucapuius* in Čomakovci (terr. of Oescus, Lower Moesia, *ILBulg* 165), daughter of *Diza*; *Mucapuis* at Arcobara (Dacia Porolissensis, *CIL* III 809), wife of an auxiliary horseman; *Mucapus Mestitu filia* in Rome (*CIL* VI 3215 = *DKR* 726), wife of *Aur. Mucianus, eques singularis Augusti*. Therefore, we have more terminations in Greek (-πουιους, -ποουις, -πουος) and in Latin (-*puius*, -*puis*, -*pus*). The same diversity of spellings concerns another Thracian female of the name family, also attested in our sanctuary: Επτηπουος (**15**)/Επτ̣[η]π̣ουεος (**16**).

Conversely, the name of the son is a frequent Latin name, *Valens*; the Genitive as -ητος, favoured sometimes for Greek (and Thracian) names as -ης, indicates that the name was originally pronounced *Vales*, a phonetic evolution that is banal in Latin, being attested frequently in the Latin epigraphy of the Balkans.[39] The spelling ὑός for υἱός is attested more times in Thrace.[40]

Despite some divergent opinions, this name Μουκαπουος (and variants) is always feminine.[41] If the first element μουκα- is very frequent in Thracian onomastics (and attested for other names, simple or assonant, in the region of Turres, see below), the second one, under diverse spellings (cf. *supra*), is used exclusively for feminine names, and always in the second position: so, Επτηπουος in Serdica (*IGBulg* IV 1959) and in our sanctuary Επτηπουος (**15**)/Επτ̣[η]π̣ουεος (**16**).[42] The *Lallname* Papas, quite frequent in Thrace (*LGPN* IV 269–270),[43] is considered altogether Thracian[44] and Greek (Παπᾶς as the hypocoristic of πάπας, "father") or Asianic;[45] however, in our case, the context is native, as it occurs sometimes in some cities of the western Black Sea shore.[46] The accentuation of this name present in more onomastic stocks varies according to the editors: Πάπας, Παπᾶς, or unaccented as an indigenous *Lallname*.

(VI) Finally, one monument displays the widespread motif of the so-called "Thracian Rider".

31. Plate depicting the "Thracian Rider"

Two adjoining fragments (and a third above) of a rectangular marble relief plate (width 24 cm; thickness 3 cm) depicting the "Thracian Rider", oriented to the right (type A Kazarow). The central parts of the votive icon, along with its upper left part, are missing. The divine personage is depicted as a young, beardless man, dressed in a tunic, and riding a horse. He has a cloak on his back, which freely flutters and he holds an oval object (perhaps an apple or a pine cone?) in his right hand. In the lower right angle of the icon, part of a tree, an altar and a woman's legs are presented. We can presume that the scene depicted the immensely popular motif of the "Thracian Rider" in the company of a woman standing in front of him along with the altar, the tree and, perhaps, a snake curled up around the tree. No inscription is visible (maybe completely erased). Јовановић 2008, 59–60, no. 10 (photo p. 69, no. 10). II–III AD (stylistically, a solid work of a local artisan, but its simplicity and not so skilful ability to present the proportion of the figure and also the plasticity in modelling the scene suggest the 3rd century).

[39] Mihăescu 1978, 205–206, § 173.

[40] Slavova 2004, 67 (six examples).

[41] Only three occurrences were known at the time of Detschew 1957, 316; two different entries in *LGPN* IV 241 (including *IGBulg* III.2 1736, considered a masculine name, according to G. Mihailov).

[42] The spelling of the second element, -πουος, is identical to that of our dedication.

[43] Another occurrence of this name could be added, in a dedication to Zeus and Hera in Caristorum, *IGBulg* IV 2179, in the sequence [---] Παπου [---] θυγάτηρ [---].

[44] Detschew 1957, 356; see also *OnomThrac* 267–268.

[45] See for the bibliography Dana 2009, 190–191.

[46] See *OnomThrac* 267–268.



After: Jovanović 2008, p. 69, fig. 10
Према: Jovanović 2008, 69, сл. 10

For a commentary of this occurrence, see below. The closest geographical and iconographical analogy to our relief from the Belava sanctuary is the votive icon from the area of Prilep (now in the Archaeological Museum in Skoplje).[47]

TWO MORE RELIEFS DEPICTING ZEUS AND HERA

APPENDIX 1.
Anepigraphic relief from Pakleštica depicting Zeus and Hera in a quadriga

Fragment of the left and central part of a marble plate (41 x 22 x 6 cm) depicting Hera and Zeus driving in a quadriga. Found in the village of Pakleštica, at about 12 km east of Turres/Pirot, near Lake Zavoj. On the left side of the fragment, a standing figure of Zeus is presented, dressed in a mantle, which was probably over his left shoulder, wrapped around the waist and falling down to god's feet. His body is slightly turned to the left side and although missing, we can presume, analogous to similar iconographic presentations, that Zeus held a thunderbolt in his raised right hand. On the god's right side is a standing figure of Hera, who is presented frontally in a long chiton tied under her breasts. The heads of both deities are missing, but they were probably, as in other votive icons of the same iconographical type, presented as a mature bearded man and a mature veiled woman. National Museum of Niš (inv. no. 176/R). Вулић 1934, 50, no. 43, photo; Pejić 2015, 445. II–III AD (the carving of the details, such as the deities' clothes, and the wheel of the quadriga, imply a very modest local work and the present linearity suggests the 3rd century).



Photo-documentation of National Museum of Niš, inv. no. 176/R
Фото-документација Народни музеј Ниш, инв. бр. 176/R

APPENDIX 2.
Anepigraphic relief of unknown origin depicting Zeus and Hera

Almost complete marble plate (19.5 x 13.5 cm), presenting a scene of Zeus and Hera sacrificing above a lit altar. On the left side of the icon, Hera is presented standing, with a long veil on her head, dressed in a long chiton tied under her breasts. In her left hand she is holding a sceptre, while in her right hand she holds a phiale above the altar with fire. Beside her right leg, between her and Zeus, a lit altar is pictured. A standing figure of a mature, bearded Zeus with wavy hair divided in the middle is presented on the right side of the icon. The god is dressed in a mantle which falls from his left shoulder, wraps around his waist and falls down his legs. While the facial traits of Hera are not recognisable, due to the damage of that part of the

[47] *CCET* V 77.

icon, the facial traits of Zeus are visible, although not so skilfully modelled – he has small eyes, a prominent nose and mouth with a dense beard. In his raised left hand he holds a sceptre, while his right hand is pointed towards the altar holding a phiale. Ichnographically, the closest analogy can be found in the votive relief from Belaštica (dept. of Plovdiv; now at NAIM, Sofia), although in that scene Hera is accompanied by another female deity and not by Zeus.[48]
Collector Antiquities, no. 1770.[49] Unpublished. II–III AD (the stylistic characteristics suggest a local work of mediocre quality, maybe in the 3rd century).



After: Collector Antiquities 1770
Према: Collector Antiquities 1770

THE GODS HONOURED IN THE BELAVA SANCTUARY: NAMES, EPITHETS, ICONOGRAPHY

Complete dedications and those that are more or less fragmentary allow the recognition in the majority of cases in the divine addressees the couple Zeus and Hera, sometimes with generic titles and honoured in almost all cases by toponymic epithets:

– Κύριος/Κύριοι (**17**; **23** and **29**, for Zeus alone). Zeus alone or Zeus and Hera, defined by the same toponymic epithet, are sometimes qualified as “Lords”, which is a frequent designation for many divinities in the Thraco-Moesian space, as an appellative of domination. This mark of honour in the lexical field of power identifies one or another god as master in his sanctuary and patron of the community that he protected.[50]

– most likely ἐπιφανέστατοι θεοί (**20**, restored). This superlative acclamation epithet for Zeus and Hera, as “gods whose power is most manifest”, is not absent from the Thracian lands (e.g., *IGBulg* II 670, for Zeus Keraunios; *IGBulg* III.1 1134, 1137, 1138, 1140 and III.2 1628, for Asclepius and Hygia; *IGBulg* III.1 1126, for Asclepius); see below a dedication to Zeus *Souideptos* on Thasos, referred to as θεὸς ἐπιφανής. This Zeus from Souidepta was also honoured as θεὸς ἐπήκοος, as in the dedication from Suvodol (see below).

– the toponymic epithet Σουιδεπτηνοί, in the majority of dedications (more or less complete): **1**, **2**, **8**, **10**, **11**, **12**, **13**, **14**, [**15**], **17**, **18**, **19**, **23** (sg., only for Zeus). A variant of this toponymic epithet, Σουιδεπτος, is present in two dedications from Suvodol and Thasos (see below). For such variations of toponymic epithets, we may invoke the cases of two sanctuaries from Lower Moesia: Δαβατοπ(ε)ιος/Δαουατοπ(ε)ιος, Δαβατοπιας/Δαβαταπιας and Δαβατοπ(ε)ιης for Hero Hephaistos in Telerig (dept. of Dobrič);[51] Αυλουσαδηνος (*IGBulg* V 5287–5289)/Αυλουσεδης (*IGBulg* V 5294)/Αυλουσαδας (*IGBulg* V 5290–5293) for Apollo in Draganovec (dept. of Tărgovište).

Ordinarily, the inscriptions unearthed in the Belava sanctuary display the name(s) of the god(s) above the relief, and below the identity of the dedicator, then his status, sometimes adding a generic formula. The variations and displays are, as in every consistent epigraphic *dossier* provided by a regional sanctuary, manifest, including the opposite way, that is the name of the dedicator preceding the divine addressees (**3**). The formulary of the dedications is habitual for the Thracian lands (as in the corpus *IGBulg*). In one case, the dedication opens with the auspicious formula Ἀγαθῇ Τύχῃ (**17**). More dedications were made upon vows or in fulfilment of vows: εὐχήν (**2**, **6**, **15**), *votum posuit* (**20**); we may remark upon the pious expression κατ' εὐχήν in **16**, “according to a vow” (cf. Lat. *ex voto*). The inscriptions express in various ways the act of consecration: εὐξάμενος (**10**, **12**, **17**); εὐχαριστήριον (**5**?, **17**, **29**); the mixture εὐξάμενος εὐχαριστήριον

48 Stojanov 1988, 720, no. 2.

49 http://www.collector-antiquities.com/18/?pcat=1&vitem=1926, consulted on 8 Dec. 2008, with the misleading precision “found in the area of eastern Europe which was once the Roman province of Dacia”.

50 See now Belayche 2020, studying the occurrences in three regions (Near East, Thrace and Egypt).

51 Alexandrov, Dana 2020, 47–52.

(**17**); in one case, the relief is labelled as a gift, δῶρον (**18**); more rarely we encounter a verb like ἀνατίθημι (**10**?, **12**, **29**), but many dedications are too broken. The motivations are not specified (as, naturally, the purpose is to ask for well-being), but two dedications were made on behalf of others: a woman represented by her son (**30**, διὰ τοῦ ὑοῦ), and an anonymous dedicator for his daughter (?) (**28**).

Thanks to recent publications, two other Greek dedications must be added to the *dossier* of Zeus and Hera *Souideptēnoi*. The same epithet pointing to a place-name **Souidepta* occurs on an amazing dedication found near Turres, published on two occasions. The lower part was edited long ago by Nikola Vulić,[52] whilst the upper part (with the epithet) was published less than a decade ago by Predrag Pejić.[53] The two adjoining fragments are part of a pedestal of limestone (140 x 69 x 65 cm), that was found sometime before WWI; the lower part was found in 1928 near Veliki Suvodol, and is kept now in the yard of the Museum of Ponišavlje (Pirot); its upper part was embedded as a support of the altar table in the cemetery church of Mali Suvodol, until 1914, when the church of Sveta Paraskeva was reconstructed and the old support was left in the diaconicon area. The editions of N. Vulić and P. Pejić were considerably improved by the Bulgarian epigraphist Nikolaj Šarankov, who had the occasion to examine the lower part of the inscription and only photos for its upper part. We present here a slightly different edition from Šarankov's readings (*AÉ*, 2017, 1266 *octies* 1):[54]

vac. Ἀγαθῇ Τύχῃ· *vac.*
Θεῷ ἐπηκόῳ Διεὶ
καὶ Ἥρᾳ Σουειδεπτῳ (!)
ἀνέστησαν οἱ κωμῆ-
ται Σαρμινοὶ ἐκ τῶ[ν]
ε̣ἰ̣δ̣είων̣ ἐ̣πειμ̣ελο̣[υ]-
[μένων ---]-
[πορ?]ε̣ο̣ς Επ̣[τ]α̣ι̣κεν̣θο[υ]
καὶ Διζασκενθου
Επταικενθου καὶ
Τηρου Διζου καὶ Μουκ-
κου Μάρκου καὶ Βειθυος
Μουκου καὶ Βλικεισηꞏ-
ους Αυλουπορεος.
vac. Εὐτυχῶς. *vac.*

This dedication honours a couple of epichoric gods, associated to Souidepta; however, the stone-cutter made an error, since he used for the two gods a singular form, moreover the masculine one, even though the epithet is preceded by Hera's name. Zeus is praised as θεὸς ἐπήκοος, "the god who listens" and fulfils the prayers. Given the lack of *gentilicia*, the inscription was engraved before 212 by six villagers from *Sarme (a Thracian place-name?), that could be identified to the Roman remains in the site Gradište (a speaking name), near Veliki Suvodol. All dedicators have Thracian names, with the exception of the common Latin patronymic *Marcus* (l. 11), and, therefore, betray a native extraction.

As if this (re)discovery was not enough, another stunning dedication to Zeus *Souideptos* was recently published. The surprise is both the location and the date: this basis of marble (79.5 x 43 x 37 cm), which supported a marble statuette, was engraved by the beginning of the 2nd century on Thasos,[55] that is a free city attached to the province of Thrace:

Δ̣ιὶ Σουιδεπτ̣[ῳ]
θεῷ ἐπιφα-
νεῖ Ζωσίμ[η]
[Ν]εικάδο[υ]
[ὑ]πὲρ τοῦ υ̣[ἱ]-
οῦ Εὐφρίλλ̣[ου]
τοῦ Ἡραγό[ρου].

The onomastic connections – as Euphrillos and Heragoras are epichoric names on Thasos – point to a Thasian family that gave at least two members in the collegium of archontes in the first and second centuries of our era. The dedication of the statue honoured Zeus alone, being apparently the oldest one in our evidence, and moreover in a familial context, far from the region of Turres (300 km as the crow flies). However, we ignore the reasons for the implantation on Thasos of such an epichoric god from another extremity of the province, defined as θεὸς ἐπιφανής, "the god whose power is manifest".[56]

---

[52] Вулић 1941–1948, 127 (no. 280) and 277, with a drawing; Пејић 2015, 368–372 (Pl. CXXIII.8).

[53] Пејић 2014 (photos of both fragments, p. 191–192, fig. 1–2).

[54] We used new photos for the lower part, for which we thank our colleague Milica Ilić from the Museum of Ponišavlje, Pirot.

[55] Fournier 2021, 363–366, no. 2.

[56] Cf. a dedication θεῷ ἐπιφανῖ ἐπηκόο̣ (*sic*) Σουρηγεση̣ from Dobroplodno (*IGBulg* V 5329, terr. of Marcianopolis).

If the iconographic and textual evidence from the Belava sanctuary indicates that the cult place was placed under the joint protection of Zeus and Hera, local protecting divinities, this never excluded dedications to other divinities[57] or, more precisely, the use of other types of reliefs, like the plate depicting the omnipresent motif of the "Thracian Rider" (**31**, type Kazarow A), so widespread in the Thraco-Moesian space[58]. This also occurred in the sanctuary of Zeus and Hera from Kozi Gramadi, where two types depicting the couple (standing and driving in a quadriga) are accompanied by the motif of the "Thracian Rider".[59] In the border region of Upper Moesia and Thrace, that is in the wider territory of Turres/Pirot, this iconographic motif of the Thracian Rider occurs on more votive monuments from Blato (ruins of the Maglič monastery),[60] Krupac,[61] Golemo/Veliko Selo,[62] Lanište,[63] Ragodeš,[64] and Osmakovo.[65]

Other divinities were depicted on three icons from the Belava sanctuary in a secondary role, as accompanying the couple Zeus and Hera, standing for an iconographic variation.

Two reliefs (**5** and **7**) from the Belava sanctuary are depicting, aside from Hera and small in size, the motif of three nymphs in the xoanon form. The cult of nymphs was quite popular in Thrace, bearing in mind not only their mythological background related to Thrace,[66] but also their identification with nature, forests, water and springs. In that latter context, the presence of nymphs in these reliefs together with Zeus and Hera should be comprehended – as divine beings of life-giving waters (lakes, springs), who underline the already existent aspect of the fertility of the two supreme deities.[67] As protectors of springs and caves, nymphs had several sanctuaries in Thrace – in Ognjanovo, the oldest sanctuary, in Burdapa, a rural one,[68] and in Kasnakovo, the only *nymphaeum* discovered in a Roman *villa*, while other sanctuaries were mainly connected to Roman baths: Aquae Calidae/Burgas, Pančarevo, Augusta Traiana/Stara Zagora and Hisar (later Diocletianopolis).[69] Votive monuments where three nymphs appear together with Zeus and Hera are known mostly in the region of Thrace, in the area of Philippopolis (more than dozen of them).[70] However, depicting nymphs in the form of xoanon on votive plates represents a Greek influence of more archaic forms and iconography.[71]

The presence of Hermes on the relief **19** is not surprising, bearing in mind the multiple roles that the god could have in different contexts. As one of the most popular Greek and Roman gods, Hermes was equally honoured in the Roman provinces of Upper Moesia and Thrace: in Moesia Superior, his popularity is confirmed by more than 70 archaeological monuments (epigraphic monuments, sculptures, bronze statues and gems),[72] while in Lower Moesia and Thrace he was no less honoured, whether alone or in the company of other gods, in many votive monuments, sculptures, votive reliefs, 30 herms and bronze statues.[73] The iconographic scenes where Zeus and Hermes are pictured together are known from Odessus[74], Krivodolska Mahala (near Montana) and Nicopolis ad Nestum.[75] One of the most prominent roles of Hermes, besides being the protector of trade, roads and abundance, is his role as a Psychopompos.[76] However, in the context of his image presented together with Zeus and Hera on the votive icon from the Belava sanctuary, we would propose an association with invoking wealth in the general sense.

---

57 The identification of the couple of divinities depicted on the relief **16** remains unclear (see comm.), with the possibility of Zeus and Hera enthroned as the most probable.

58 The image of the "Thracian Rider" appears on more than 2,000 published votive reliefs discovered in various localities in Thrace or other territories populated by Thracians; see Dimitrova 2002 and the magnificent monograph of Oppermann 2006.

59 Hristov 2014, 153 (three tablets). It is, however, important to notice that one of these tablets depicting the Thracian Rider honours Zeus and Hera, in Greek (Hristov 2014, 160, FIN 89), thus suggesting that the main god(s) were variously figured, and that the artisans differently presented them.

60 Пејић 2009; Пејић 2015, 360–361, 271–280.

61 *CCET* V 23; Петровић 1979, 182.

62 *CCET* V 24.

63 Јеремић 2003, 53–60.

64 *CCET* V 22; Пејић 2015, 503–505.

65 *CCET* V 21. In Upper Moesia more than 100 representations are known of the Thracian Rider, in limestone and marble votive reliefs, mostly discovered inland of the province, while a minority of monuments is known from the *limes* area and urban centres.

66 Rhesus, the mythical king of Thrace, was raised by the nymphs.

67 Hristov 2014, 151.

68 Rabadjiev 2015, 451.

69 http://bogdana-krivoshieva.com/ кои-са-божествените-нимфи-и-техните-хр/.

70 Oppermann 2010–2011, 264.

71 The xoana were used in Thrace during ritual practices, either in the statuary form or in votive reliefs (Petrova 2020, 216).

72 See Gavrilović 2014.

73 About the cult of Hermes in Lower Moesia and Thrace, see Драганов 2011, 2018a and 2018b.

74 Velkov, Gerassimova-Tomova 1989, 1358.

75 Stojanov 1988, 722, nos. 26, 28.

76 Gavrilović 2014, 63 and further.

THE TOPONYM **Souidepta*

In the paper from 2009,[77] a smaller group of inscribed monuments testified for another epithet of Zeus and Hera in Thrace, Σουιδεπτηνοί, most likely toponymic; this was confirmed not only by other pieces unearthed in the same sanctuary,[78] but also by dedications from Suvodol and Thasos, providing the variant Σουιδεπτος. The main epithet is constructed like an ethnic with the suffix -ηνός, so productive in Asia Minor and the Near East,[79] and so frequent in the Thracian space in Roman times.[80] Σουιδεπτηνοί was then derived from a locality *Σουιδεπτα, just like the toponymic epithet *Καριστορηνοί, again for Zeus and Hera, in the territory of Pautalia in Western Thrace (*IGBulg* IV 2150–2158, 2160–2168), was derived from *Καριστορον/*Caristorum* (today Kopilovci, dept. of Kjustendil). This place-name *Σουιδεπτα could by a compound one or suffixed:

– the best parallel for the first element remains the name of the ἐμπόριον Θουιδαι (today Sliven), in the territory of Augusta Traiana (*IGBulg* V 5634), that occasioned the toponymic epithet of Apollon Συιδηνός (*SEG* LIII 646; *AÉ*, 2003, 1567), from a parallel form *Συιδαι/Θουιδαι. *Σουιδεπτα and *Συιδαι share the same root Σο(υ)ιδ-. We may add an epithet of Hero, Σουιτουληνός (*IGBulg* IV 2139, in Boboraci, terr. of Pautalia), probably toponymic (from *Σουιτουλα).

– as for the second element (or suffix) -επτα, it occurs for the place-name *Burdipta*/Βουρδέπτω in the region of Svilengrad, on the road between Philippopolis and Hadrianopolis.[81]

The ancient name of Pirot, Turres, is Latin, and could have been a parallel form of a native name like *Σουιδεπτα, but this remains, for the moment, only speculation.

THE DEDICATORS

The number of personal names present in the complete or fragmentary dedications is remarkable, placing the Belava sanctuary among the most valuable onomastic sources for the Thracian regions. We can list about 20 different anthroponyms completely preserved, and at least 19 dedicators with the onomastics or the status more or less complete. The names range, from a linguistic point of view, in three main categories, almost equally:

– Thracian names (6 occurrences, 7 persons): Β̣ι̣θ̣υ̣ς, Διζας (twice), Επτηπουος/Επτ̣[η]π̣ουεος (f.), Μουκαπουος (f.), Παπας, [---]π̣υ̣ρις (f.);
– Latin names (6 occurrences): Ἰούλιος, Λούκιος, Μάξιμος, Μᾶρκος, Σιλβανός, Οὐάλης;
– Greek names (4 occurrences, 6 persons): Ἀπολλώνιος (twice), Ἑρμογένης (twice?), Ἡρακλίδης, Χειόνη;
– incomplete names (5): Τα̣[---] (name?), *[---]es*, [---]ων, [---]όρου (Gen.), [---]ώ̣ρου (Gen.).

For men and women alike, it is striking to constate an onomastic mixture, so typical of the Balkan provinces and other spaces (like Asia Minor, Syria, Egypt) during imperial times:

– Thracian idionym, Thracian patronymic (*Lallname*): Μουκαπουος Παπου (**22**) (her son has a Latin name, Οὐάλης);
– Thracian idionym, Latin patronymic: Επτηπουος/Επτ̣[η]π̣ουεος Ἰουλίου (**15**/**16**);
– Latin idionym, Greek patronymic: Σιλβανὸς Ἀπολλ[ωνί]ου (**2**);
– Latin *cognomen*, Thracian (?) patronymic: Αὐρ. Μάξιμος Τα̣[---] (**22**);
– Greek idionym, Thracian patronymic: Ἡρακλίδης Διζου (**17**);
– Greek idionym, Latin patronymic: Ἑρμογένης Μάρκου (**12**);
– fragmentary name (Greek?), Thracian patronymic: [---]ων Διζου (**21**).

Such diverse combinations show not only the profound imbrication of the three onomastic stocks, Thracian, Greek and Latin,[82] but testify also, in a Hellenophone region, the progressive ascendent of Latin names.

As for the juridical status, the onomastic formulas indicate a majority of peregrines – identified by their idionym (**5**, **29**) or more often by their idionym + patronymic (**2**, **3**, **4**, **12**, **15**/**16**, **17**, **18**, **21**, **30**) –, but also

---

[77] Dana 2009.

[78] Јовановић 2008.

[79] Fraser 2009, 196–197.

[80] See Detschew 1936; Dana 2014, 184 and n. 17.

[81] *Itin. Ant.* 137,2 and 231,6 (*Burdipta*); Procopius of Caesarea, *De aed*. 4.11 (Βουρδέπτω); corrupted in *Burdista* (*Itin. Burdig.* 569,1) and *Burdenis* (*TP* 8.3). *Burdipta* could be slightly corrupt. See Detschew 1957, 81; Beševliev 1970, 39 (explaining Βουρδέπτω as an Abl. form of a singular, *Burdipta* being a plural) and 134–135.

[82] About this phenomenon, see Dana 2011.

some recent Roman citizens (two or three *Aurelii*: **10**, **22**). One dedication emanates from a *bouleutēs* (**17**), certainly of the city of Serdica; finally, two dedications were made by soldiers of the Roman army, one in Greek (**7**, [στρατ]ιώτης, maybe a legionary), the other in Latin (**20**), a legionary: *miles l̥[eg(ionis) ---]*.

Four women appear as dedicators, directly or indirectly, in our evidence: Επτηπουος/Επτ̣[η]π̣ουεος Ἰουλίου (**15**/**16**), Μουκαπουος Παπου (**22**), Χειόνη (**28**) and [---]π̣υ̣ρις (**5**); two of these names belong to the native series in *-puius*, *-puis*, *-pus*, -πουιους, -πουις, -πουος (*OnomThrac* 279)[83]. All four are, judging by their names, of native extraction. This feminine involvement is explained by the presence of Hera, alone or in a couple with Zeus. It is important to note that Eptepouos, daughter of Ioulios, visited the Belava sanctuary at least twice (**15**/**16**).

This onomastic evidence must now be correlated with the already known sources regarding the anthroponymy of the inhabitants of the region of Turres:

– a complete gravestone with a human head in relief, found in Pirot, for the wife of a *bouletēs* of Serdica, who died at 36 years of age: Ἀγαθῇ τύχῃ·| Μάξιμος Δρο|ληους β(ουλευτὴς) Οὐλ| [4]πίας Σερδικῆς | Επτεπυρι Τίτου | τῇ συμβίῳ μνή|μης χάριν ζη|[8]σάσῃ ἔτη | λϛʹ;[84] again, we can observe the mixture of Thracian and Latin names for these peregrines;

– a list of members of a *koinon* from Turres worshipping *Theos epēkoos hypsistos*, The Most High God "who listens" (to the prayer),[85] under the priest Hermogenes and the *prostatēs* Augoustianos, by the end of the 2nd or the beginning of the 3rd century.[86] More than a quarter of the names are Thracian (including assonance ones): Μοκας (l. 9), Μο[κι]ανός (assonance name, twice: l. 9, 12), Πύρος (assonance name, l. 11), and a theophoric name like Σεβαζιανός (l. 14–15), associated with the particular name *Sebastianus*/Σεβαστιανός;[87]

– a dedication from Suvodol, already discussed (see *supra*), listing the names of more villagers from Sarme (Thracian idionyms and patronymics, and only a Latin patronymic): [---πορ?]ις Επ̣[τ]α̣ι̣κεν̣θο[υ], Διζασκενθος Επταικενθου, Τηρης Διζου, Μουκκας Μάρκου, Βειθυς Μουκου, Βλικεισης Αυλουπορεος.

If we analyse the native names from the Turres region, of explicitly Thracian facture, the majority are pan-Thracian, but some of them are western Thracian names, as Μουκας/Μοκας, and the assonance name Πύρος. From this point of view, Turres lay again in a border region (onomastics, languages, epigraphic habits and iconography).

A REGIONAL SANCTUARY

The Belava sanctuary of Zeus and Hera *Souideptēnoi* appears now to have been the most important sanctuary in the area of Turres,[88] today Pirot,[89] in a natural depression between Stara Planina, Vlaška Planina and Belava, in the hydrographic basin of Nišava (affluent of Južna Morava). Turres, a *statio* on the road from Naissus to Serdica, was situated in the territory of Serdica, in the westernmost part of the province of Thrace before entering Upper Moesia. More Greek inscriptions and some Latin milestones, as well as a military diploma, are known in Turres or in its

[83] For this series of names, see Georgiev 1978 (proposing an etymology, which requests caution). In the neighbourhood, we may invoke a fragmentary name [---π?]ουις, at the sanctuary of Caristorum (terr. of Pautalia, *IGBulg* IV 2180); cf. also *Deopuis in* Eastern Macedonia (*OnomThrac* 124).

[84] Вулић 1934, 53, no. 51 (photo); Пејић 2015, Pl. CLXVIII.5 and CXXXVIIIb.8 (photos, allowing to improve the first edition). Differences of readings: Δρο|λήου τῆς Οὐ[λ]|πίας Σερδικῆς and ἔτη ληʹ Vulić; β(ουλευτὴς) Οὐλ|πίας Σερδικῆς and ἔτη λϛʹ Sharankov (friendly communication, as he examined the monument, and remarked that "the letter B is marked as an abbreviation with a line above it").

[85] About the epithet *hypsistos*, see Belayche 2005 and 2011.

[86] Ἀγαθῇ [Τύ]χ[ῃ].| Θεῷ ἐπηκόῳ ὑψίστῳ | εὐχὴν ἀνέστησαν |[4] τὸ κοινὸν ἐκ τῶν ἰ|δίων, διὰ ἱερέως | Ἑρμογένους καὶ προ|στάτου Αὐγουστιανοῦ·|[8] Ἀχιλλεύς, Αὐρῆλις, Δῖο⟨ς⟩, Ἀλέ|ξανδρος, Μοκας, Μο[κι]ανός,| Δομῆτις, Σοφεῖνος, Παυ|λεῖνος, Πύρος, Ἀπολινά|[12]ρις, Μοκιανός, [Σ]ῆλυς (?) | καὶ Ἀλέξανδρος Ἀσκ|ληπιάδου, Θια[---], Σεβαζι|ανὸς Θη[...]ΤΟΥΤΑC |[16] [---]. See von Domaszewski 1886, 238–239, no. 2; Dumont–Homolle 316, O; Tacheva-Hitova 1983, 178 (no. III.24) and 197–198 (no. IV.11); Gavrilović Vitas 2021, 169–171 and 249; cf. *IGBulg* IV 1924 = V 5674. This altar (81 x 60 x 40 cm) was found in Pazar (formerly, the Jewish quarter of Pirot) and was kept before 1904 in the yard of the church from that quarter of Pirot. While von Domaszewski supposed a θία[σος] Σεβαζιανός, Boris Gerov recognised a personal name. As the inscription seems lost, it is not possible to improve the reading of the last lines.

[87] On this name, see Dana 2010.

[88] *Turribus* (*TP* 7.5 and *It. Ant.* 135,2; also *Annon. Rav.* 4.7); *mansio Turribus* (*It. Burdig*. 566,8).

[89] Valtrović 1884, 150; Kanitz 1892, 82–83; Гарашанин 1951, 170; P. Petrović, in *TIR* K 34, 1976, 128–129, s.v. *Turres*; Petrović 1977; P. Petrović, in *IMS*, IV, 1979, 26; Пејић 2015, 448–498.

immediate vicinity,[90] but the epigraphic knowledge of the region remains insufficient, mostly for modern reasons: this peripheral region that, with Caribrod/Dimitrovgrad, was claimed by Serbia and Bulgaria, was not included in the corpus of inscriptions from Upper Moesia (because it lay in Thrace) nor in the corpus *IGBulg* of Georgi Mihailov (because it was in Serbia).[91] Accordingly, this part of ancient Thrace and modern Serbia appears as an epigraphic no man's land.[92]

To the dedications and epitaphs already mentioned in the previous section, we may add other Greek inscriptions published by the end of the 19th century: more honorific dedications on milestones for the dynastic families (some of them emanating from the city of Serdica, and one from Pautalia), such as Septimius Severus,[93] Cornelia Paula Augusta (Elagabalus' wife for a short period, 219–220), raised by ἡ Σ[ερ]δῶν πόλι[ς],[94] for Elagabalus, most likely raised by the same city of Serdica,[95] for Marcia Otacilia Severa, wife of Philipp the Arab, raised by ἡ Σέρδ[ων πόλις],[96] for the same couple, raised by the city of Pautalia;[97] fragments of a civic decision[98] and of two epitaphs.[99] Recently, Nikolaj Šarankov republished more milestones found along the road from Turres to Serdica, on the occasion of Emperor Julian's passage through the territory of Serdica on his way from Naissus to Constantinople, along the *Via Diagonalis/Militaris*.[100] Turres lay on the *Via Militaris,* which assured the communication from Singidunum and Viminacium *via* Naissus to Serdica and then to Byzantium and Asia Minor. It went through the valley of the river Nišava, which was an important communication axis and very suitable for the formation of settlements because of its fertile land and many thermal springs. Between Turres (Thrace) and Remesiana (Upper Moesia) was located the *statio Latina*, marking the entry into the Latinophone part of the Balkans.[101] Not far away was the territory of another province, Lower Moesia – however, with changing borders –, in an area where the sanctuary of Zeus from Gaganica (Montana dept.) was situated, which also provided reliefs with Zeus and Hera driving in a quadriga.[102]

Further, the inclusion of Turres into the larger territory of Serdica is confirmed by the find-spot of a military diploma from 7 January 222: Planinica, a small village South of Pirot, near Dimitrovgrad. The bronze document was for the praetorian *C. Aurelius C. f. Vlp(ia) Valens Serdic(a)*.[103]

In the cultic domain, we may list several Greek dedications (most of them fragmentary) on reliefs depicting the Thracian Rider in more sites in the close vicinity of Turres: in Osmakovo, for Artemis (?), from Λούκιος Τερεντι[ανοῦ?];[104] in Ragodeš, [Κυρ]ίῳ [---];[105] in Krupac (near Pirot), a complete dedication for Apollo and Asclepius Βερακεληνοί from Gaios son of Proklos,[106] testifying a compound placename **Berakela* (the second part meaning "springs"); in Golemo/Veliko selo, Κυρίῳ Ἀσκληπίῳ;[107] in Poganovo near Caribrod/Dimitrovgrad, an almost complete relief depicting Zeus standing, inscribed Διὶ πατρῴῳ.[108] Accordingly, thanks to such religious offerings, we are informed of the native toponymy of the region: **Berakela*, **Sarme*, **Souidepta*.

The sanctuary of Zeus and Hera *Souideptēnoi* at the Markova štrapka site on the Belava mountain belongs

---

[90] Other remains in the vicinity: Vrgudinac (antique architecture), Krupac (remains of antique building, a milestone of Philip the Arab, a votive relief dedicated to Apollo and Asclepius), Ragodeš (reliefs of Mithras and depiction of the Thracian Rider), near Caribrod/Dimitrovgrad (two milestones and a necropolis, see Петровић 2007, 80–81).

[91] Sharankov 2019, 41 n. 5, rightly observed: "Numerous stone monuments in Pirot and its region attest the presence of experienced local stonecutters".

[92] "The extreme south-eastern corner of Serbia that belonged to the Roman province of Thrace is archeologically almost unexplored" (Petrović, Grbić 2019, 23).

[93] Вулић 1931, 117, no. 282, photo (maybe from Pirot).

[94] von Domaszewski 1886, 238, no. 1; Dumont–Homolle 316, N; *IGR* I 689.

[95] *CIG* III 3708; *IGR* I 686; Dumont-Homolle 315–316, M.

[96] Вулић 1933, 62–63, no. 184 (*AÉ*, 34, 196).

[97] *AÉ*, 1913, 175 = *ILIug* III 1459 = *AÉ*, 2017, 1266 *septies* (found in Krupac, near Pirot).

[98] Вулић 1933, 63, no. 185.

[99] Вулић 1933, 63, no. 186; Пејић 2015, 479–480 (Pl. CLXVa.11 and CLXVIII.1).

[100] Sharankov 2019 (two columns from Pirot).

[101] *Mutatio Latina*, situated some 13 km east of Remesiana, near the sites of Crnoklište and Staničenje, was probably the last station after Remesiana before the territory of Thrace began, judging by the Latin epigraphy documented until there, while the Greek language prevails further along the road. See *IMS*, IV, 1979, 25; Petrović 2019, 155–157; Petrović, Grbić 2019.

[102] See Морфова 1957.

[103] *RMD* I 75; *Sardic(a)* intus.

[104] *IMS* IV 80; *CCET* V 21 (photo Pl. XI).

[105] *CCET* V 22 (photo Pl. XI); Oppermann 2006, 167 and 329, no. 203 (photo Pl. 19).

[106] Depicting two riders: *CCET* V 23 (photo Pl. XII); Oppermann 2006, 167 and 327, no. 152 (photo Pl. 14).

[107] *CCET* V 24 (photo Pl. XII); Oppermann 2006, 167 and 335, no. 405 (photo Pl. 36).

[108] Вулић 1934, 60, no. 69 (photo); Вулић 1941–1948, 306, no. 71 (photo); Пејић 2015, Pl. CIX.8 (photo).

to the type of most frequent rural sanctuaries, which were founded on the mountain tops.[109] This type of sanctuary was not only most frequent, but also most popular in the inland regions of the Roman province of Thrace[110]. The dimensions of the sacral space at Markova štrapka and the architectural remains of monumental building elements of sacral structures speak of its importance, as do the abundance of at least one type of votive offering given by worshippers – 31 votive icons. The iconographic scene of the supreme divine couple sacrificing together or separately (Zeus alone or Hera alone) is very frequent and well-known from numerous Thracian sites. Different iconographic types of scenes presented on ex-votos from the Belava sanctuary, however, have one unique trait, whether the supreme divine couple is pictured together in the act of sacrifice or driving in a quadriga or whether the deities are presented alone sacrificing[111] – all three iconographies are alluding to Zeus and Hera as protectors and patrons of fertility.

Different shapes of votive reliefs and skilfulness in the carving of inscriptions and iconographic scenes pose the unavoidable question of possible workshops where the icons from the Belava sanctuary were produced, at the same time bearing in mind their similarities (in shape and iconography) with the already known ex-votos from the above mentioned sanctuaries (Pernik, Gaganica, Kozi Gramadi etc.). Since it is clear that the Belava sanctuary was locally one of the larger and main (if not the main) Zeus and Hera sanctuaries in the region of Turres, we can presume that votive plates came from different workshops – to the support of this assumption goes the fact of the different quality of so-far known icons: some of them are distinguished with carefully and knowledgeably carved inscriptions and figural images, while the majority of icons are characterised by mediocre artisan work and are of less quality – which is again compatible with the financial means of venerators, presumably the majority of worshippers were of average financial means. Thus, we suggest that more qualitative votive reliefs from the Belava sanctuary came from the workshops under the stronger Hellenic influence, south of Turres, while those that are of mediocre quality were mass produced, probably in the workshops that were distanced and where the artisans were less acquainted with the Hellenic models.

Almost all so-far known votive reliefs from the Belava sanctuary were found in a very fragmented state, which does not allow the assumption about the existence of holes on icons for fixing on the walls (or some other part)[112] of the sanctuary. If we are to judge by the four votive reliefs, now in the antiquity collection in the Museum of Ponišavlje in Pirot, their reverse sides are not treated and are without holes, which implies that ex-votos were just placed as offerings in the sanctuary.

Since the area of the Belava sanctuary was plundered during the last decades, it is unknown what other artefacts were also given as offerings to the deities (which are expected in analogous sanctuaries such as Kozi Gramadi, for instance), such as lamps, spindle whorls (offerings related to the weaving that was present in the rural areas), ceramics, coins, votive statues, etc. Again, because of the lack of systematic archaeological excavations, we cannot presume the existence of the Belava sanctuary earlier than the Roman period. However, if the pre-Roman existence of a sanctuary at the Markova štrapka site could be presumed, then it could also be probable that an unknown Thracian local god and goddess were venerated, who were by their roles and functions similar to the Greek supreme divine couple Zeus and Hera and, thus, identified with them and were venerated during the Roman period (with their unique epithet *Souideptēnoi*) and perhaps in the period before.

Finally, the observation of P. Pejić while visiting the site of Markova štrapka and the presumed area of the Zeus and Hera *Souideptēnoi* sanctuary, that two smaller buildings could be perceived, raises a question of their function: if one building was presumably the sanctuary of Zeus and Hera, was the second building a sanctuary of some other deity or was it perhaps a building used as a *sacrarium* or for communal meals of worshippers?

This sanctuary placed on Belava mountain dedicated to Zeus and Hera *Souideptēnoi* reveals as one of the most important in the large territory of Serdica. It stands already as one of the most documented cult centres in Western Thrace, serving as the main reference of protection near an axis of circulation at the borders of three Roman provinces, in the middle of the Balkans.

---

109 Hristov 2014, 269.

110 On extra-urban sanctuaries in Thrace, see Вълчев 2015.

111 On more than 30 votive reliefs from Thrace and Moesia Inferior, Zeus is presented alone in the act of sacrifice (Hristov 2014, 154).

112 For instance, on wooden beams which are presumed to have existed in Zeus and Hera sanctuary in Kozi Gramadi (Hristov 2014, 138).

INDEX

Gentilicia

Idionyms and *cognomina*

Gods and epithets

Fonctions

Iconography

BIBLIOGRAPHY:

Abbreviations:

CCET V	*Corpus Cultus Equitis Thracii*, I, II.1, II.2, IV, V, Leiden 1979–1984 (*EPRO* 74).
DKR	M. P. Speidel, *Die Denkmäler der Kaiserreiter. Equites singulares Augusti*, Cologne 1994.
IGBulg	G. Mihailov, *Inscriptiones Graecae in Bulgaria repertae*, I–V, Sofia 1958–1997.
ILBulg	B. Gerov, *Inscriptiones Latinae in Bulgaria repertae* [*inter fluvios Oescum et Iatrum*], Sofia 1989
IMS	*Inscriptions de la Mésie Supérieure*, I, II, III.2, IV, VI, Belgrade 1976–1995.
LGPN IV	P. M. Fraser, E. Matthews, R. W. V. Catling (éds.), *A Lexicon of Greek Personal Names. IV. Macedonia, Thrace, Northern Regions of the Black Sea*, Oxford 2005.
LIMC	*Lexicon Iconographicum Mythologiae Classicae*, Zürich-Munich-Düsseldorf, I–VIII (1981–1997), *Indices* (1999), *Supplementum* 1–2 (2009).
OnomThrac	D. Dana, *Onomasticon Thracicum (OnomThrac). Répertoire des noms indigènes de Thrace, Macédoine Orientale, Mésies, Dacie et Bithynie*, Athens 2014 (*MELETHMATA* 70).

Literature:

Alexandrov, Dana 2020 – O. Alexandrov, D. Dana, *Les inscriptions du sanctuaire de Hérôs Héphaïstos Dabatopios de Telerig*, Veliko Tărnovo 2020.

Athanassakis, Wolkow 2013 – A. Athanassakis, B. Wolkow, *The Orphic Hymns*, Baltimore 2013.

Belayche 2005 – N. Belayche, Hypsistos. Une voie de l'exaltation des dieux dans le polythéisme gréco-romain, *Archiv für Religionsgeschichte*, 7, 2005, 34–55.

Belayche 2011 – N. Belayche, Hypsistos. A Way of Exalting the Gods in Graeco-Roman Polytheism, in J. A. North, S. R. F. Price (eds.), *The Religious History of the Roman Empire: Pagans, Jews, and Christians*, Oxford 2011, 139–174.

Belayche 2020 – N. Belayche, *Kyrios* and *despotes*: Addresses to Deities and Religious Experiences, in V. Gasparini, M. Patzelt, R. Raja, A.-K. Rieger, J. Rüpke, E. R. Urcioli (eds.), *Lived Religion in the Ancient Mediterranean World. Approaching Religious Transformations from Archaeology, History and Classics*, Berlin-Boston 2020, 87–115.

Beševliev 1970 – V. Beševliev, *Zur Deutung der Kastellnamen in Prokops Werk "De Aedificiis"*, Amsterdam 1970.

Бојовић 1977-1978 – Д. Бојовић, Митрине иконе и иконе подунавског и трачког коњаника из Сингидунума, *Старинар*, 28–29, Београд 1977–1978, 135–142 (D. Bojović, Mitrine ikone i ikone podunavskog i tračkog konjanika iz Singidunuma, *Starinar*, 28–29, Beograd 1977–1978, 135–142).

Dana 2009 – D. Dana, Inscriptions inédites de Macédoine et de Thrace, *Zeitschrift für Papyrologie und Epigraphik*, 168, 2009, 187–195.

Dana 2010 – D. Dana, La préhistoire du nom de Saint-Sébastien: onomastiques en contact, in R. W. V. Catling, F. Marchand (eds.), *Onomatologos. Studies in Greek Personal Names Presented to Elaine Matthews*, Oxford 2010, 390–397.

Dana 2011 – D. Dana, L'impact de l'onomastique latine sur les onomastiques indigènes dans l'espace thrace, in M. Dondin-Payre (ed.), *Les noms de personnes dans l'Empire romain. Transformations, adaptation, évolution*, Bordeaux 2011 (*Scripta Antiqua* 36), 37–87.

Dana 2014 – D. Dana, Notices épigraphiques et onomastiques I, *Zeitschrift für Papyrologie und Epigraphik*, 188, 2014, 181–198.

D. Dana, M. Dana 2016 – D. Dana, M. Dana, Quelques inscriptions grecques et latines des collections privées de Bulgarie, *Ancient West and East*, 15, 2016, 161–182.

Detschew 1936 – D. Detschew, Die Ethnika auf -ανός, -ηνός, *Zeitschrift für vergleichende Sprachforschung*, 36. 3–4, 1936, 227–240.

Detschew 1957 – D. Detschew, *Die thrakischen Sprachreste*, Vienna 1957 (repr. 1976).

Dimitrova 2002 – N. Dimitrova, Inscriptions and Iconography in the Monuments of the Thracian Rider, *Hesperia*, 71, 2002, 209–229.

Драганов 2011 – Б. А. Драганов, *Култът на Хермес в римските провинции Долна Мизия и Тракия*, София 2011 (A. Draganov, *Kultăt na Hermes v rimskite provincii Dolna Mizija i Trakija*, Sofija 2011).

Драганов 2018a – Б. Драганов, Епиграфски паметници, свързани с култа към Хермес-Меркурий в провинции Долна Мизия и Тракия (B. Draganov, Epigrafski pametnici, svărzani s kulta kăm Hermes-Merkurij v provincii Dolna Mizija i Trakija) in: *Stephanos archaeologicos ad 80 annum professoris Ludmili Getov*, София (Sofija) 2018 (*Studia Archaeologica Universitatis Serdicensis Suppl.* 6), 269–277.

Драганов 2018b – Б. Драганов, Отражението на култа към Хермес-Меркурий в каменната пластика от провинции Долна Мизия и Тракия, in *Археологически хоризонти. Сборник в чест на 70-годишнината на доц. д-р Иван Джамбов*, Пловдив 2018, 92–106 (B. Draganov, Otraženieto na kulta kăm Hermes-Merkurij v kamennata plastika ot provincii Dolna Mizija i Trakija, in: *Arheologičeski horizonti. Sbornik v čest na 70-godišninata na doc. d-r Ivan Džambov*, Plovdiv 2018, 92–106).

Fournier 2021 – J. Fournier, Les *theoi epiphaneis* à Thasos. Deux nouvelles occurrences épigraphiques, *Ktèma*, 46, 2021, 357–367.

Fraser 2009 – P. M. Fraser, *Greek Ethnic Terminology*, Oxford 2009.

Гарашанин, Гарашанин 1951 – М. Гарашанин, Д. Гарашанин, *Археолошка налазишта у Србији*, Београд 1951 (M. Garašanin, D. Garašanin, *Arheološka nalazišta u Srbiji*, Beograd 1951).

Gavrilović 2014 – N. Gavrilović, *The Cults of Hercules and Mercury in Upper Moesia from the First to the Fourth Century*, Belgrade 2014.

Gavrilović Vitas 2020 – N. Gavrilović Vitas, *Dolicheneum* and Dolichenus' Cult Objects from the Locality Brza Palanka – Egeta. Contribution to the Study of the Cult of Iuppiter Dolichenus, in I. Radman-Livaja, T. Bilić (eds.), *Monumenta Marmore Aereque Perenniora. A Volume Dedicated to Ante Rencić-Miočević*, Zagreb 2020, 204–223.

Гавриловић Витас 2021 – Н. Гавриловић Витас, Култ бога Аполона у римским провинцијама на централном Балкану/N. Gavrilović Vitas, The Cult of God Apollo in the Roman Provinces of the Central Balkans, *Зборник Народног Музеја у Београду. Археологија*, 25.1, 2021, Београд 173–200 (Zbornik Narodnog Muzeja u Beogradu. Arheologija, 25.1, 2021, Beograd 173–200).

Gavrilović Vitas 2021 – N. Gavrilović Vitas, *Ex Asia et Syria. Oriental Religions in the Roman Central Balkans*, Oxford 2021 (*Archaeopress Roman Archaeology* 78).

Georgiev 1978 – Vl. Georgiev, Das thrakische Wort *pui-s*, *pu-s* "Mädchen, Tochter", *Linguistique Balkanique*, 21.2, 1978, 5–8.

Hristov 2014 – I. Hristov, *Светилище на Зевс и Хера на връх Кози Грамади в Средна Гора / A Sanctuary of Zeus and Hera on Kozi Gramadi Peak in Sredna Gora*, Sofia 2014.

Јеремић 2003 – Г. Јеремић, Нова икона Трачког коњаника из околине Ремезијане, *Зборник Народног музеја у Нишу*, 12, Ниш 2003, 53–60 (G. Jeremić, Nova ikona Tračkog konjanika iz okoline Remezijane, *Zbornik Narodnog muzeja u Nišu*, 12, Niš 2003, 53–60).

Јовановић 2008 – А. Јовановић, Трачко светилиште на Белави код Пирота, *Зборник Народног музеја Ниш*, 16–17, Ниш 2008, 55–70 (A. Jovanović, Tračko svetilište na Belavi kod Pirota, *Zbornik Narodnog muzeja Niš*, 16–17, Niš 2008, 55–70).

Kanitz 1892 – F. Kanitz, *Römische Studien in Serbien. Der Donau-Grenzwall, das Strassennetz, die Städte, Castelle, Denkmale, Thermen und Bergwerke zur Römerzeit im Königreiche Serbien Römische*, Vienna 1892 (*Denkschriften der Kaiserlichen Akademie der Wissenschaften. Philosophisch-historische Klasse* 41).

Любенова 2008 – В. Любенова, Непубликовани оброчни паметници от римската епоха във фонда на музея в Перник, *Известия на Регионален Исторически музей*, 1, Перник 2008, 45–86 (V. Ljubenova, Nepublikovani obročni pametnici ot rimskata epoha văv fonda na muzeja v Pernik, *Izvestija na Regionalen Istoričeski muzej*, 1, Pernik 2008, 45–86).

Mihăescu 1978 – H. Mihăescu, *La langue latine dans le sud-est de l'Europe*, Bucarest–Paris 1978.

Младенова 1966 – Я. Младенова. Към култа на Зевс и Хера в нашите земи, *Археология*, 8.3, 1966, 34–38 (Ja. Mladenova, Kăm kulta na Zevs i Hera v našite zemi, *Arheologija*, 8.3, 1966, 34–38).

Морфова 1957 – Зл. Морфова, Светилище на Зевс и Хера при Гаганица, Берковско, *Известия на Българския археологическия институт*, 21, 1957, 302–314 (Zl. Morfova, Svetilište na Zevs i Hera pri Gaganica, Berkovsko, *Bulletin de l'Institut Archeologique Bulgare*, 21, 1957, 302–314).

Oppermann 2006 – M. Oppermann, *Der Thrakische Reiter des Ostbalkanraumes im Spannungsfeld von Graecitas, Romanitas und lokalen Traditionen*, Langenweißbach 2006

(*Schriften des Zentrums für Archäologie und Kulturgeschichte des Schwarzmeerraumes* 7).

Oppermann 2014 – M. Oppermann, Nymphenkult im Ostbalkanraum zwischen Donau und Rhodopen während der Römerzeit, *Il Mar Nero*, 8, 2010–2011, 249–275.

Паскова, Вълчев 2006 – С. Паскова, И. Вълчев, Култова пластика от фонда на Исторически музей – Гоце Делчев, *Археология*, 47, 2006, 146–151 (S. Paskova, I. Vălčev, Kultova plastika ot fonda na Istoričeski muzej – Goce Delčev, *Arheologija*, 47, 2006, 146–151).

Пејић 2009 – П. Пејић, Представа Трачког коњаника из манастиришта св. Николе код Пирота, *Зборник Народног Музеја*, 19.1, Београд 2009, 271–280 (P. Pejić, Predstava Tračkog konjanika iz manastirišta sv. Nikole kod Pirota, *Zbornik Narodnog muzeja*, 19.1, Beograd 2009, 271–280).

Пејић 2014 – П. Пејић, Вотивни натпис из Великог Суводола код Пирота – прилог проучавању култова и топонимије у области Туреса, *Гласник Српског Археолошког друштва*, 30, Београд 2014, 189–206 (P. Pejić, Votivni natpis iz Velikog Suvodola kod Pirota – prilog proučavanju kultova i toponimije u oblasti Turesa, *Glasnik Srpskog Arheološkog društva*, 30, Beograd 2014, 189–206).

Пејић 2015 – П. Пејић, *Античка топографија Пиротског краја*, непубликована докторска дисертавија одбрањена на департману за археологију Филозофског факултета Универзитета у Београду, Београд 2015 (P. Pejić, *Antička topografija Pirotskog kraja*, unpublished doctoral dissertation defended in the Department for Archaeology, Faculty of Philosophy, University of Belgrade).

Пејић 2022 – П. Пејић, Нове вотивне иконе трачког култа Зевса и Хере ΣΟΥΙΔΕΠΤΗΝΟΣ и римско светилиште на Марковој Штрапки са планине Белава код Пирота, *Зборник Народног музеја Ниш*, 30, Ниш 2022, 9–38 (P. Pejić, Nove votivne ikone tračkog kulta Zevsa i Here ΣΟΥΙΔΕΠΤΗΝΟΣ i rimsko svetilište na Markovoj Štrapki sa planine Belava kod Pirota, *Zbornik Narodnog muzeja Niš*, 30, Niš 2022, 9–38).

Пенчева 2014 – Е. Пенчева, Нови наблюдения върху светилището на Хера в околностите на село Нови Хан, Софийско, *Известия (София)*, 26, София 2014, 89–107 (E. Penčeva, Novi nabljudenija vărhu svetilišteto na Hera v okolnostite na selo Novi Han, Sofijsko, *Izvestija (Sofija)*, 26, Sofija 2014, 89–107).

Petrova 2020 – S. Petrova, Cults and Cult Sculpture from Nicopolis ad Nestum and its Vicinity, *Acta Musei Tiberiopolitani*, 3, Strumica 2020, 201–226.

Петровић 1979 – П. Петровић, Понишавље у античко доба (неки аспекти археолошке топографије пиротског краја), *Пиротски зборник*, 8–9, Пирот 1979, 177–184 (P. Petrović, Ponišavlje u antičko doba (neki aspekti arheološke topografije pirotskog kraja), *Pirotski zbornik*, 8–9, Pirot 1979, 177–184).

Петровић 2007 – В. П. Петровић, *Дарданија у римским итинерарима. Градови и насеља*, Београд 2007 (V. Petrović, *Dardanija u rimskim itinerarima. Gradovi i naselja*, Beograd 2007).

Petrović 2019 – V. P. Petrović, *Les voies et agglomérations romaines au cœur des Balkans. Le cas de la Serbie*, Bordeaux 2019 (*Scripta Antiqua* 120).

Petrović, Grbić 2019 – V. P. Petrović, D. Grbić, The Roman Roads between Upper Moesia and Thrace: Archaeological and Epigraphic Evidence, *Journal of Ancient Topography*, 24, 2014, 23–32.

Rabadjiev 2015 – K. Rabadjiev, Religion, in J. Valeva, E. Nankov, D. Graninger (eds.), *A Companion to Ancient Thrace*, Malden (Mass.)-Oxford 2015, 443–457.

Sharankov 2007 – N. Sharankov, New Thracian Personal Names and Divine Epithets, *Acta Musei Varnaensis*, 5, 2007, 424–444.

Sharankov 2016 – N. Sharankov, Notes on Greek Inscriptions from Bulgaria, *Studia Classica Serdicensia*, 5, 2016, 305–361.

Sharankov 2019 – N. Sharankov, "Infectam usque fatale exitium": The Milestones of Emperor Julian in the Territory of Serdica and the Conflict of Paganism and Christianity, *Archaeologia Bulgarica*, 23.3, 2019, 41–70.

Sharankov, Cherneva-Tilkiyan 2005 – N. Sharankov, S. Cherneva-Tilkiyan, Heros Spartokos, *Thracia*, 16, 2005, 223–233.

Srejović 1958 – D. Srejović, Les anciens éléments balkaniques dans la figure de Marko Kraljević, *Živa Antika*, 8.1, 1958, 75–97.

Slavova 2004 – M. Slavova, *Phonology of the Greek Inscriptions in Bulgaria*, Stuttgart 2004 (*Palingenesia* 83).

Stojanov 1988 – T. Stojanov, s.v. *Hera (in Thracia)*, in *LIMC* IV.1, 1988, 719–723.

Tacheva-Hitova 1983 – M. Tacheva-Hitova, *Eastern Cults in Moesia Inferior and Thracia (5th Century BC – 4th Century AD)*, Leiden 1983 (*EPRO* 95).

Валтровић 1884 – M. Валтровић, Разне вести, *Старинар*, 1, Београд 1884, 150–152 (M. Valtrović, Razne vesti, *Starinar*, 1, Beograd 1884, 150–152).

Вълчев 2015 – И. Вълчев, *Извънградските светилища в римската провинция Тракия (I–IV век)*, София, 2015 (I. Vălčev, *Izvăngradskite svetilišta v rimskata provincija Trakija (I–IV vek)*, Sofija 2015).

Velkov, Gerassimova-Tomova 1989 – V. Velkov, V. Gerassimova-Tomova, Kulte und Religionen in Thrakien und Niedermösien, *ANRW*, II.18.2, 1989, 1317–1361.

von Domaszewski 1886 – A. von Domaszewski, Griechische Inschriften aus Moesien und Thrakien, *Archäologisch-epigraphische Mitteilungen aus Österreich-Ungarn*, 10, 1886, 238–244.

Вулић 1931 – Н. Вулић, Антички споменици наше земље, *СCKA*, 71, Београд 1931, 4–259 (N. Vulić, Antički spomenici naše zemlje, *SSKA*, 71, Beograd 1931, 4–259).

Вулић 1934 – Н. Вулић, Антички споменици наше земље, *СCKA*, 77, Београд, 1934, 29–84 (N. Vulić, Antički spomenici naše zemlje, *SSKA*, 77, Beograd 1934, 29–84).

Вулић 1941–1948 – Н. Вулић, Антички споменици наше земље, *СCKA*, 98, Београд 1941–1948, 1–335 (N. Vulić, Antički spomenici naše zemlje, *SSKA*, 98, Beograd 1941–1948, 1–335).

Резиме: НАДЕЖДА ГАВРИЛОВИЋ ВИТАС, Археолошки институт, Београд
ДАН ДАНА, CNRS/HISOMA, Лион

ЗЕВС И ХЕРА *SOUIDEPTENOI*: СВЕТИЛИШТЕ НА ПЛАНИНИ БЕЛАВА КОД ПИРОТА/*TURRES*

Кључне речи. – Грчка епиграфика, Хера, Иконографија, ономастика, Пирот (*Turres*), светилиште, *Souidepta*, Тракија, вотивне иконе, Зевс

Трагови архитектонских остатака античког храма посвећеног божанствима Зевсу и Хери, са епитетом Соуидептенои, изведеним од локалног топонима, откривено је на локалитету Маркова штрапка на планини Белава код Пирота, у пограничној зони римских провинција Горње Мезије и Тракије. Светилиште је обухватало теменос, жртвеник и два мања храма правоугаоног облика, оријентисана исток–запад, са улазом на источној страни. Иако су светилиште више пута пљачкали илегални копачи, који су девастирали објекте и покрали налазе из њих, аутори овога рада су успели да лоцирају чак 31 фрагментовани вотивни рељеф, од којих се на већини, уз иконографске представе божанстава, налазе и дедикације истима на старогрчком језику.

За анализу и интерпретацију култова Зевса и Хере Соуидептенои, поред архитектонских остатака светилишта, најзначајнији су садржаји до сада познатих вотивних рељефа, на којима се може разликовати више типова иконографских представа: Зевс и Хера који стоје и врше либацију изнад жртвеника, Зевс и Хера на престолу, Зевс и Хера у квадриzи, Зевс са фијалом изводи либацију изнад олтара, Хера са фијалом изводи либацију изнад олтара и представа Трачког коњаника. С обзиром на то да су на већини иконографских представа приказана два врховна грчка божанства, иако поред њих фигурирају и друга божанства попут Хермеса, Трачког коњаника и три нимфе, јасно је да су се дедиканти примарно обраћали њима, на шта указују и текстови дедикација. Ономастичка анализа указује на дедиканте претежно трачког и грчког порекла, као и на четири женска дедиканта. Сам топоним Соуидепта вероватно представља или старогрчки назив античког Пирота (латински Turres) или пак старогрчки назив некога од локалитета у околини.

Ако се сагледају архитектонски и археолошки налази из светилишта на Белави, може се закључити да је оно представљало изузетно значајно светилиште у области Пирота у антици, који се налазио на стратешки врло важном месту, на *via militaris,* повезујући Сингидунум преко Виминацијума и Ниша са Сердиком, а потом и Константинополисом. Иако је у питању рурални тип светилишта који се најчешће и гради на узвишењима, може се претпоставити да је храм Зевса и Хере Соуидептенои доминирао над другим мањим светилиштима и представљао значајно сакрално место, аналогно светилиштима у Пернику, Гаганици и Кози Грамади у Тракији, те да је живело од 2. до краја 3. или почетка 4. века, када услед царских едиката уперених против пагана и паганских светилишта, као и ранохришћанских активности, долази до уништавања култних предмета у храму и престанка постојања светилишта на Марковој штрапки на планини Белава код Пирота.

UDC: 904:625.7"652"(398)
902.2/.3(497.11)"2017/..."
https://doi.org/10.2298/STA2272217D
Original research article

MILIJAN DIMITRIJEVIĆ, The University of Sydney, Sydney
JOHN WHITEHOUSE, Independent Researcher, Sydney

THE VICINAL ROAD BETWEEN SIRMIUM AND THE GREAT CANAL OF PROBUS. EXPLORING ROMAN ROADS IN THE GLAC STUDY AREA

e-mail: milijan.dimitrijevic@sydney.edu.au

Abstract. – As part of a comprehensive archaeological survey of the area around the site of Glac in the north-west of Serbia, a detailed examination has been undertaken of the pattern of the Roman roads, including the location of a vicinal road that led from the eastern periphery of ancient Sirmium along the Sava river to the Great Canal of the emperor Probus, the present-day Jarčina channel. The context of vicinal roads in the general pattern of Roman roads together with the implications of the road construction and usage throughout the Roman period including changes in the settlements pattern along its route are explored.

Key words. – Local Roads, Pannonia Secunda, Roman road, Sirmium, *via vicinalis, Vicinal Roads*

A joint Australian–Serbian archaeological survey project commenced in 2017 in the north-west of Serbia, in the vicinity of Sremska Mitrovica. The survey is part of the Glac Project, a co-operative programme between The University of Sydney and the Institute of Archaeology in Belgrade.[1] Associated with the archaeological excavations of the Glac site, situated 4 km south-east of Sremska Mitrovica, the Glac Survey is being undertaken as a comprehensive archaeological survey of the area around Glac with the aim to position the site and its surrounding within a broader spatial and chronological framework, and in definite historical and socio-political contexts on the basis of documentary evidence.

The Survey Project aims to:

1) identify the spatial and temporal settlement patterns during the Roman period;

2) establish the environmental context of the settlement pattern throughout the Roman era;

3) recognise the consequential rural economic base of this area in Antiquity;

4) examine the immediate environs of the Glac site and locate outbuildings, necropoleis, water supply system, routes of transport, and the relationship of the site with the Sava river.

The area subject to the archaeological survey has been defined as the Glac Study Area. It encompasses the territory around the Glac site, including a part of the Srem region north and northeast of the Sava river, and a part of the Mačva region south and southwest of the river, covering approximately 700 km². It stretches between the Fruška Gora mountains in the north, and the Jerez river in the south, between the Čalma meridian in the west (excluding the town of Sremska Mitrovica), and the Jarak-Ruma meridian in the east (Fig. 1).[2]

In Antiquity, the Study Area was within the Pannonia Inferior province, that is within the late Roman province of Pannonia Secunda, around the Roman city

[1] The Glac Project is under the co-directorship of Professor Richard Miles from the University of Sydney and Dr Stefan Pop-Lazić from the Institute of Archaeology in Belgrade. The survey component of the overall Glac Project is undertaken under the leadership of the authors of this paper.

[2] Vojnogeografski institut 1979a; Vojnogeografski institut 1979b.

Manuscript received 21st February 2022, accepted 27th October 2022

of Sirmium and touching the territory of Bassianae, east of Sirmium.[3]

As part of the Glac Survey 2017–2021, an examination has been undertaken of spatial communication routes in the Study Area.

This includes mapping of the position and direction of a vicinal road south-east of Sirmium, between the city and the mouth of the Great Canal of Probus, which was mentioned in written sources[4], and has been identified as the present-day Jarčina Channel.[5] This road connected the settlements along the left bank of the Sava river including the architectural complex found at Glac.

A local Roman road south-east of Sirmium in archaeological literature

The archaeological literature on Roman roads in the eastern periphery of Sirmium has usually focussed on the imperial road or *via militaris* that led from Sirmium through Bassianae to Singidunum. However, in addition to the imperial road, a local road existed on the eastern outskirts of the city in proximity to the imperial road. Hence, one needs to consider the location of these two roads on the eastern periphery of Sirmium and the point where these two roads diverged in different directions. This is the area where the Eastern Necropolis of Sirmium was found outside of the eastern gate of Sirmium. This area runs from west to east for approximately 1.3 km, and with a varying width, up to 300 m wide.[6]

A school teacher and local archaeologist from Sremska Mitrovica, Ignjat Jung, who collaborated with the Archaeological Museum in Zagreb, reported on several occasions his observations apropos the Roman roads in the proximity of Sremska Mitrovica.[7]

In the winter of 1904, Jung wrote a letter (No. 267) to the Archaeological Museum in Zagreb in which he put emphasis on a road that connected Sirmium with Bonnonia in the north.[8] However, in the letter Jung also sketched the Roman roads east of Sirmium. Jung concluded that a single Roman road began at Sirmium's eastern gate and crossed the Čikas Canal traversing to the east; according to Jung this road split into three roads further east of a bridge across the Čikas Canal:

1) one led to the north-east to Vijenac (the Klisina site north-east of Sremska Mitrovica; WGS84: 44°58'35.76"N 19°42'11.97"E);

2) the middle road traversed the fields to the east in a straight line, and this road led to the way station of Fossae (the *via militaris*);

3) the third road stretched to the south-east.[9]

In the sketch, the south-eastern road led along the left bank of the Sava river and cut next to what Jung described as the "Castra of Khagan Bayan", which he considered was situated at the Glac site (WGS84: 44°57'4.79"N 19°39'51.97"E).[10] This road traversed from north-west to south-east on the northern side of the "Castra of Khagan Bayan", and led further in a south-westerly direction towards the village of Jarak. Jung noted this road proceeded towards Gensis, a Roman station known from *Tabula Peutingeriana*, which he explained with the existence of a Roman bridge over the Sava river south-east of the city, between Glac and Jarak or in proximity of Jarak, since Gensis was situated on the Drina river far in the south-west and the road made a turn after the point of the bridge.[11]

Furthermore, an indication of the existence of a Roman road south-east of Sirmium has been implied in three sketches and two letters (Nos. 304 and 306) made by Jung in December 1904.[12] According to Jung, south-east of the city, just north of the mouth of the Čikas Canal, which at the time flowed into the Sava river 900 m further east than today, the road was located next to Roman buildings and other structures that were excavated in 1904.[13] This area today lies within the industrial zone south-east of Sremska Mitrovica, in

[3] Mirković 2017; Mócsy 1974.

[4] Aurelius Victor, Liber de Caesaribus XXXVII; Historia Augusta, The Life of Probus XXI.1–4.

[5] Црнобрња 2015, 200, 201; Dimitrijević 1969, 83; Mirković 2017, 47.

[6] Miladinović-Radmilović 2011, 80, 188, 191, 194, 214, 270–273, Fig. 85, Fig. 90, Fig. 158; Милошевић 2001, 152, 160, 163, 165–167; Jeremić 2017, 26, 27, Fig. 12, Fig. 14.

[7] Miladinović-Radmilović, Radmilović 2015, 212.

[8] Miladinović-Radmilović, Radmilović 2015, 58; Милошевић 1988, 122, сл. 6.

[9] Miladinović-Radmilović, Radmilović 2015, 58; Милошевић 1988, 122, сл. 6. The questions regarding this road and the positions of the Sirmium bridges over the Sava river were also discussed by V. Popović, and then by A. Crnobrnja, V. P. Petrović, and M. Jeremić see: Црнобрња 2015, 186–188; Crnobrnja 2020, 143–144; Jeremić 2016, 105–112; Петровић 2015, 188–189; Поповић 2003, 126.

[10] Miladinović-Radmilović, Radmilović 2015, 47, 58; Милошевић 1988, 122, сл. 6.

[11] Omnes Viae 2011; Miladinović-Radmilović, Radmilović 2015, 58, 82, 83, 156.

[12] Miladinović-Radmilović, Radmilović 2015, 82, 83, 155, 156; Милошевић 2001, 34, 35.

[13] Miladinović-Radmilović, Radmilović 2015, 82, 83, 155, 156; Милошевић 2001, 34, 35.

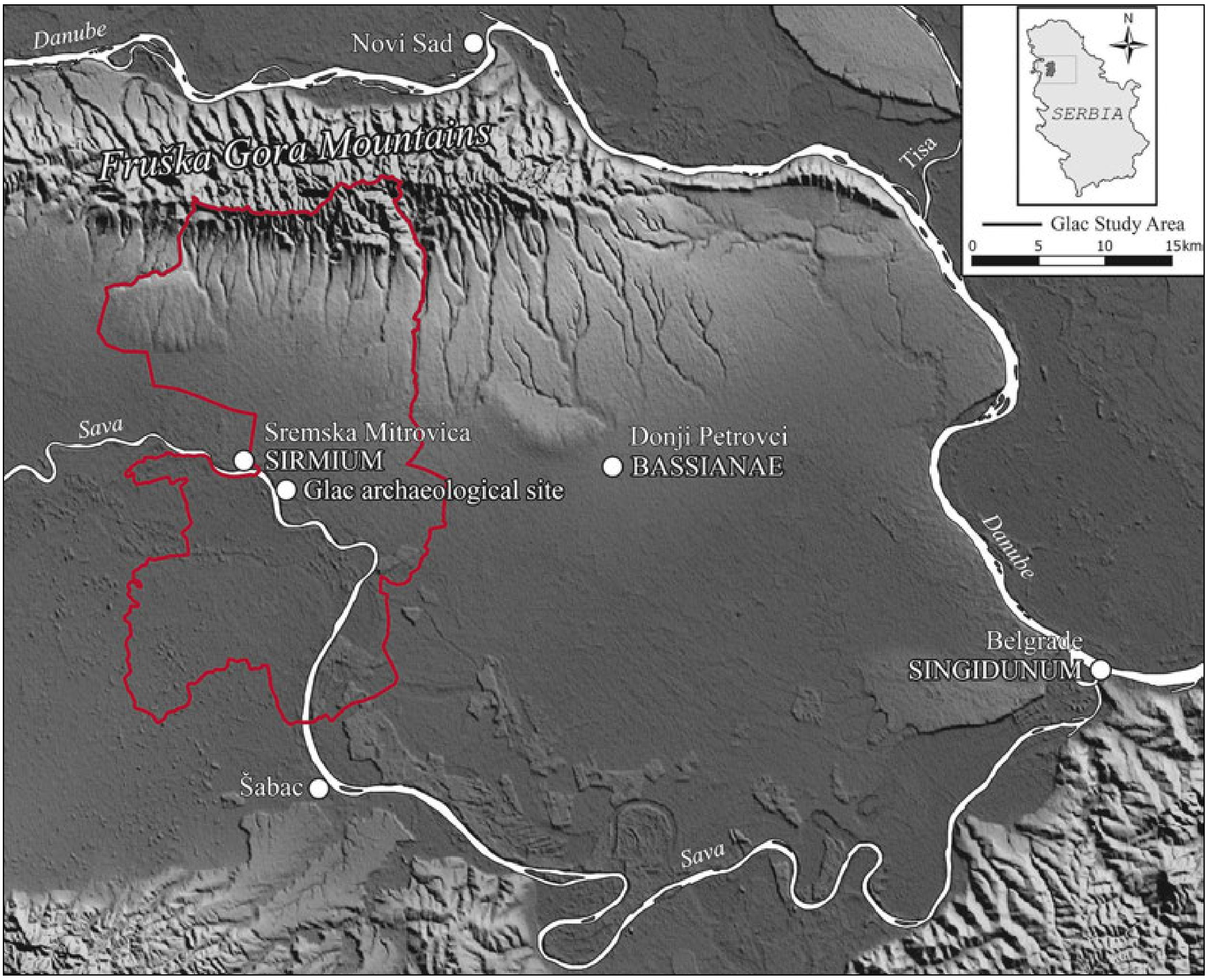


Fig. 1. The Glac Study Area

Сл. 1. Подручје истраживања „Пројекта Глац"

the area of the Customs (Carina) Complex (WGS84: 44°57'56.87"N 19°38'31.47"E) and the Leget Port (Luka Leget) storage and office buildings, between the former mouth of the Čikas Canal in the south and the old Jarak road in the north.

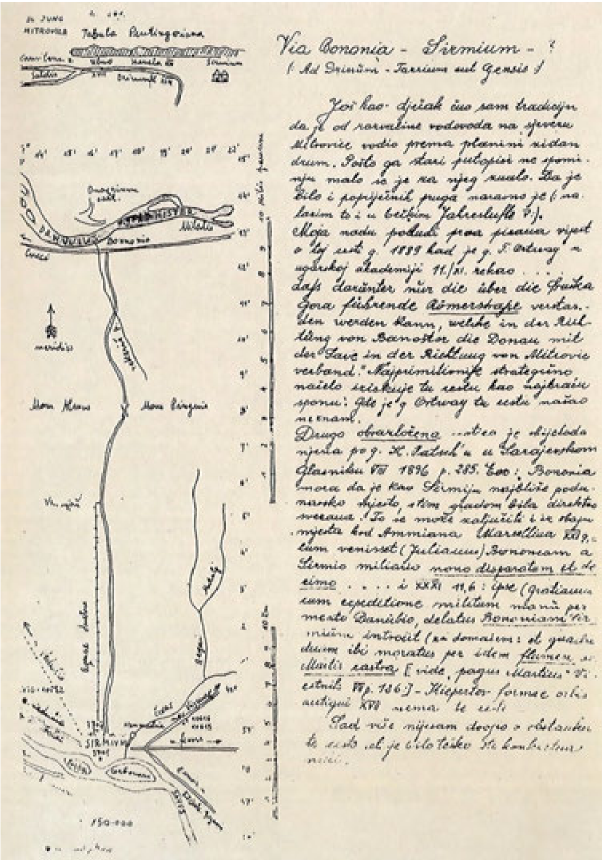
The Roman structures were discovered in the parcels that belonged, at the time, to the families of Keller (WGS84: 44°57'57.47"N 19°38'30.74"E), Škribanek (WGS84: 44°57'56.91"N 19°38'32.16"E), and Marušić (WGS84: 44°57'55.47"N 19°38'35.84"E).[14]

The described remains included a complex of larger public buildings made of stone and found in the Škribanek parcel, with its north-western corner in the Keller parcel; the complex stretched in a northeast to southwest direction and included two buildings connected with a porch that was supported by three rectangular pillars in the middle and between the two buildings.[15] The dimensions of the complex were 41 m by 12.75 m, with the larger building in the south being 25.5 m long with two rooms, of which the northern one had a wide door at the side of the porch. The porch between the two buildings was 7 m wide. The northern building had three rooms, with a door facing the porch, and another door on the opposite (northern) side, 3.5 m wide. To the east, a circular floor surface was found and next to it a paved surface with concrete, 1.5 m by 5 m in dimensions.[16]

---

[14] Miladinović-Radmilović, Radmilović 2015, 82, 83, 155, 156; Милошевић 2001, 34, 35.

[15] Miladinović-Radmilović, Radmilović 2015, 82, 83, 155, 156; Милошевић 2001, 34, 35.



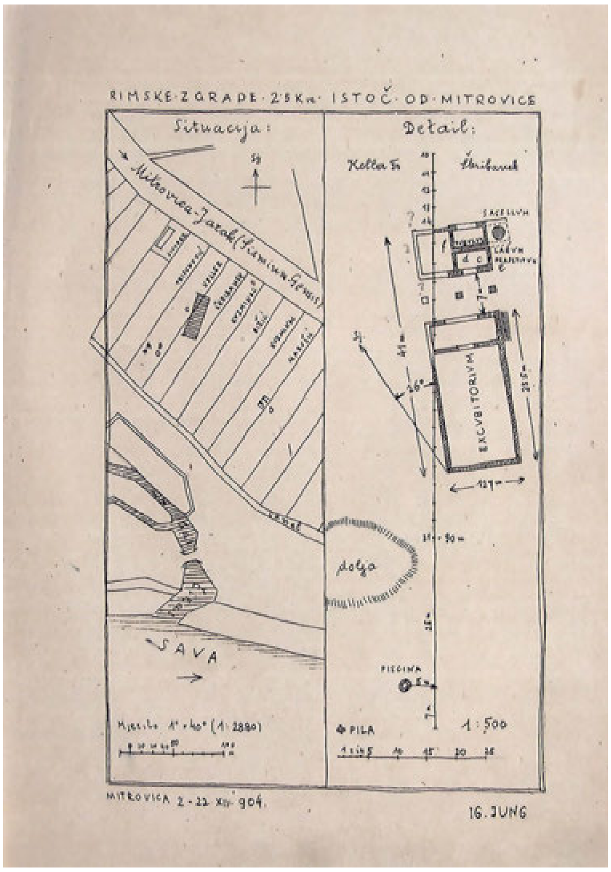


Fig. 2. Letter No. 267 of Ignjat Jung from 1904 (Miladinović-Radmilović, Radmilović 2015, 58)
Сл. 2. Писмо бр. 267 Иīњаūа Јунīа из 1904. īодине (Miladinović-Radmilović, Radmilović 2015, 58)

Fig. 3. Sketch of Ignjat Jung from December 1904 showing Roman buildings in the present-day customs complex area in the south-east of Sremska Mitrovica (Miladinović-Radmilović, Radmilović 2015, 83)
Сл. 3. Скица Иīњаūа Јунīа из децембра 1904. која ūриказује римске зīраде на ūросūору данашњеī царинскоī ūерминала на јуīоисūоку Сремске Миūровице (Miladinović-Radmilović, Radmilović 2015, 83)

The larger building in the south Jung initially interpreted as "*excubitorium*" (a night watchman post or a sentry); and the smaller building in the north as a shrine of deities, guardians of homes and crossroads (*Lares* – "*sacellum larum praestitum*"), with a water pipe or a sewer pipe ("*tubulus*") also located in the building.[17]

South of the complex, a circular "*piscina*", a well approximately 3 m in diameter, was discovered in the parcel of Keller, as well as a pillar with its base in a shape of a cross 1.2 m in diameter positioned southwest of the well but without being interpreted by Jung. South-east of the buildings a potter's kiln was found in the parcel of Marušić; several other walls were also found in the proximity, and Jung also sketched a larger oval depression south-west of the buildings in the Keller parcel, approximately 15 m in diameter.[18]

According to Jung, a Roman road should had been located next to the complex excavated in 1904, leading in the direction of the south-east along the left bank of the Sava river.[19]

[16] Miladinović-Radmilović, Radmilović 2015, 82, 83, 155, 156; Милошевић 2001, 34, 35.

[17] Miladinović-Radmilović, Radmilović 2015, 82, 83, 155, 156; Милошевић 2001, 34, 35.

[18] Miladinović-Radmilović, Radmilović 2015, 82, 83, 155, 156; Милошевић 2001, 34, 35.

[19] Miladinović-Radmilović, Radmilović 2015, 82, 83; Милошевић 2001, 34, 35.

A century after Jung made his observations, Petar Milošević noted that remains of a local Roman road that connected villas and smaller settlements along the Sava's left bank were discovered east of Sremska Mitrovica.[20] However, no further comments were made concerning the exact position and structure of the road.

Most works that mentioned a Roman road between Sremska Mitrovica in the northwest and Jarak in the south-east since the late 19th century onwards are referring to the *via militaris* that connected Sirmium and Singidunum. This route, noted in the Antonine Itinerary, the Peutinger Table, the Bordeaux Itinerary and the Ravenna Cosmology, passes through the way station of Mutatio Fossae on the route to Bassianae.[21] The erroneous location of Fossae at the village of Jarak has led many authors to assume that as Jarak is located on the banks of the Sava river, then the road between Sirmium and Jarak following the left bank of the Sava was, in fact, the main *via militaris.*[22] Once it had been confirmed that the *via militaris* did not follow the left bank of the Sava river;[23] then any road along the river bank between Sirmium and the mouth of the Great Canal of Probus was not the well-known *via militaris*, but another category of road.

The implications of the erroneous location of Fossae and the route of the *via militaris* are well illustrated on the major maps of the area in the Roman period. In the volume for the area in the *Tabula Imperii Romanii* series for Aqvincvm – Sarmizegetvsa – Sirmivm (Sheet L34 Budapest), Fossae is located at Jarak and the *via militaris* proceeds south east to Fossae, before looping back to Bassianae.[24] In contrast, the Barrington Atlas of the Greek and Roman World locates Fossae near the village of Šašinci and the main road is shown from Sirmium to Bassianae, following the correct route of the *via militaris*.[25] The Barrington Atlas classifies roads only as either major or minor ones, with their routes either known or approximate. No road is shown following the left bank of the Sava river between Sirmium and the mouth of the Great Canal of Probus at Jarak.

A road between Sremska Mitrovica and Singidunum along the river was also mentioned in passing by Brukner and Dautova-Ruševljan.[26] A. Crnobrnja noted the route of this road as a straight line connecting Sremska Mitrovica with the northern periphery of Jarak away from the edge of the river terrace, and then proceeding further to Singidunum in the south-east.[27]

However, these general observations were made on the basis of vague notions on the distribution of the Roman sites in this area, without any precise indication of the road's position and its exact directions.

Therefore, our aim was to map the position and direction of the road by means of field survey and remote sensing methods (LiDAR, satellite imagery, and aerial photography), taking into account the literary evidence, registered archaeological sites, and the environmental features of the area.

Viae vicinales **and Roman roads**

Before proceeding to consider further the Sava river road from Sirmium to the mouth of the Jarčina Channel, it is important to understand the role and status of local roads in the Roman world. Roman roads have been the subject of considerable interest to modern scholars, with most authors identifying three categories of roads:[28]

a) Imperial roads, referred to as *viae consulares,* or *viae militares,* and sometimes as *viae publicae*.

b) Local roads, or *viae vicinales*.

c) Private or estate roads, or *viae privatae*.

---

[20] Милошевић 2001, 75.

[21] Itinerarium Antonini Avgvsti et Hierosolymitanvm: ex libris manvscriptis 1848, 267 [563.7, 563.8, 563.9, 563.10, 563.11]; Omnes Viae 2011; Ravennatis Anonymi Cosmographia et Gvidonis Geographica 1860.

[22] Brukner 1981; Брукнер, Даутова-Рушевљан 2015, 37; Brunšmid 1905; Даутова-Рушевљан 1983; Graf 1941 [1936]; Kiepert 1998 [1894]; Klemenc 1961; Kukuljević 1873; Ljubić 1883; Mayer 1957; Miller 1916; Patsch 1910; Šaranović-Svetek 1986; Вулић 1939.

[23] Dimitrijević, Whitehouse 2021.

[24] Union Académique Internationale 1969, Map L. 34 and 59.

[25] Talbert 2000, Map 21. On this road see: Црнобрња 2015, 168–170; Crnobrnja 2020, 131–133; Dimitrijević 1961, 101; Dušanić 1967; Milin 2004. 257–258; Милошевић 1988; Милошевић 2001, 74–75; Mirković 2017, 232–234 [CIL III 10615; CIL III 10616]; Петровић 1995, 9–11; Петровић 2015, 36–39, 225–226; Popović 1980; more on archaeological traces of the road and its location see: Dimitrijević, Whitehouse 2021.

[26] Брукнер, Даутова-Рушевљан 2015, 27.

[27] Црнобрња 2015, Карта 1–10; Crnobrnja 2020, Map 1–10. Also, another road along the Sava river connecting Sirmium and Singidunum was described by A. Crnobrnja; but the road started from a bridge at Sirmium and continued along the right bank of the Sava river, passing through Municipium Spodent[…]; see: Црнобрња 2015, 189–194, Карта 1–10; Crnobrnja 2020, 145–146, 148, Map 1–10. This road on the right bank of the Sava river was noted as being of secondary importance and roughly sketched by V. P. Petrović; see: Петровић 2015, 39; Petrović 2019, Fig. 2, Fig. 4, Fig. 7, Fig 8.

[28] Chevallier 1976, 65; Laurence 1999, 59–61; Kolb 2019, 13.

Thereafter, most authors concentrate on the first category of imperial roads. This is fully understandable, as these are the roads identified in the various itineraries and the Peutinger Table and these roads often leave a more visible trace on the landscape. Examples of regional studies skewed towards the imperial roads are in Africa,[29] Britain,[30] Italy,[31] and Bulgaria.[32]

The totality of Roman roads is often referred to as a system or network, suggesting that all roads were designed and operated as an integrated whole. Margary has described the Roman roads in Britain as "an impressive complete network".[33]

This is a misleading concept. The imperial roads were designed for an entirely separate and distinct purpose, unrelated to the system of local roads. The imperial roads were constructed by the army or conscripted civilians;[34] and they were paid for by the central administration with occasional contributions by *civitates* along the road.[35] Their construction or repair was often commemorated in boastful milestones or inscriptions dedicated to the emperor. An example is in an inscription on a cliff between Viminacium and Retiaria on the right bank of the Danube, dated to AD 100 which reads:

"The Emperor Caesar Nerva TRAJAN Augustus Germanicus, son of the deified Nerva, *pontifex maximus*, holding tribunician power for the fourth year, father of his country, consul three times, built this road by cutting through the mountains and eliminating the curves."[36]

The role of imperial roads was to serve the state administration for military transport and the imperial post system for official correspondence (*cursus publicus*) created by Augustus.[37] They were not built for private use or indeed to promote or facilitate local or regional transport of private individuals or for trade and commerce, nor were they built to complement or integrate with local transport routes, either pre-existing or proposed. They were designed to provide the quickest means of transport between large centres for the military and the *cursus publicus*, and paid little heed to any smaller centres. While designed for official public use, the use of imperial roads by the public was permitted, although the subsidised support services in way stations provided through the system of post warrants were confined to official use.[38] The weights of vehicles and the loads of animals using imperial roads was regulated to prevent damage in the Theodosian Code, which contained no equivalent provisions for local roads.[39] As Kolb writes:

"In the Roman Empire, roads were both [a] foundation and means of power".[40]

Co-existing with the system of imperial roads were the local roads (*viae vicinales*). Prior to the construction of imperial roads, in most parts of the empire there were pre-existing roads dating from before the Roman occupation. Some of these pre-existing roads, where convenient, were converted to imperial roads if they served the needs of the imperial road system.[41] Others retained their role as part of the local road system. With the construction of imperial roads, over time, new local roads would be constructed to connect to and take advantage of the imperial roads as well as connecting to other pre-existing local roads. Thus, over time, what were two separate systems of roads merged in places, as the local road system grafted onto and took advantage of the system of imperial roads, although their separate core roles remained.

Despite the attention given to imperial roads, local roads made up the greater part of the roads of the Roman empire.[42] Although Laurence concludes that "…the *viae vicinales* would have had only a local significance for those using them"[43], given the focus of the local inhabitants and the economy would have been largely local, their significance for local communities (as opposed to the imperial administrators and military officials) would have been high. To that extent, the *viae vicinales* are the neglected poor relatives of the imperial roads, lacking the prestige and engineering munificence, but shouldering more of the burden for local communication and the local economy.

Local roads were publicly owned, rather than privately owned, but they were the responsibility of the local administration of towns and villages, rather than

---

[29] Salama 1951.
[30] Margary 1967; Viatores 1964.
[31] Radke 1981.
[32] Madzharov 2017.
[33] Margary 1967, 27.
[34] Chevallier 1976, 84.
[35] Chevallier 1976, 65.
[36] CIL III, No. 14, 149; trans. Lewis, Reinhold 1990b, 73.
[37] Chevallier 1976, 181; Suetonius, Life of Augustus 49.3.
[38] Theodosian Code, Book 8 Title 5.
[39] Theodosian Code, Book 8 Title 5.
[40] Kolb 2019, 11.
[41] Bagshawe 2000, 14; Codrington 1918, 310.
[42] Chevallier 1976, 66.
[43] Laurence 1999, 61.

the central administration. This is made clear in the various known town charters.

An example is the Charter of Osuna (ancient Urso) in Spain, granted by Julius Caesar in 44 BC, which provides:

"LXXVII. If any *duovir* or *aedile* shall desire in the public interest to make, lay down, alter, build, or pave any streets, gutters, or sewers within the boundaries belonging to the Colonia Julia, it shall be lawful for the said persons to do the same, provided that no injury is done to private persons.

LXXVIII. Respecting public roads and footpaths which were within the boundaries assigned to the colony, all such thoroughfares, roads, and footpaths which exist or shall exist or have existed in the said territories, shall be public property."[44]

There is a clear distinction in responsibilities for road construction, maintenance and improvement for imperial roads and local roads, with the responsibility for the former residing with the central State, while the latter was the responsibility of local *coloniae*, *municipia*, as well as *pagi* and, as shall be seen, landowners. Sitting alongside the local roads (*viae vicinales*) were private or estate roads, with restricted access, linking estates to the local or imperial roads and providing boundaries to land parcels.[45]

Viae vicinales **in Roman law and surveying**

Some insight can be gained regarding *viae vicinales* with an examination of surviving texts of Roman law and Roman surveying practice. Each of these classes of texts approach *viae vicinales* from different perspectives and for different purposes.

The Twelve Tables provide for minimum road widths of 8 *pedes* while proceeding in a straight line and 16 *pedes* on a curve, but otherwise there are no provisions relating to roads.[46] The Theodosian Code contains two extensive titles on imperial roads and the imperial post warrants and way stations, but is silent on anything relating to local roads.[47] This reflects the lack of interest by the central imperial government in local roads.

The Digest of Justinian contains the only significant legal provisions relating to local roads. These are references sourced to the second century AD jurist Ulpian (Gnaeus Domitius Annius Ulpianus). Ulpian identifies a tripartite classification of road; being imperial roads, local road and private roads. The Digest provides that, irrespective of their origins, local roads are public as opposed to private property. Applying a perspective of the central Roman administration, it notes that imperial roads provide a coherent system, while local roads do not:

"Ulpian, Sabinus, book 33: Local roads established by private contributions of land of which there is no longer any recollection are included among public ways. 1. But between these and other military roads there is this difference, that military roads terminate at the seashore, in cities, public rivers, or another military road, and others trail off with no way out."[48]

The Digest provides that if the land on which a road has been built is public land, then the road is a public road and the public have a general right to use it. This applies to both imperial roads and local roads. To that extent imperial roads and local roads are the same. The Digest notes that while some of the construction and maintenance of local roads was undertaken or paid for by private landowners, such private contributions do not affect the status of the local road, which always remains public and available for public use despite the private contribution. However, Ulpian raises an exception to the public ownership status of a local road where the land on which the road is built was contributed by a private person. Also, he noted that in some circumstances a private road may be public. He notes that urban roads are the responsibility of town magistrates, but in rural areas a looser arrangement applies, with responsibility for construction and maintenance in the hands of local communities and local landowners.

The discussion on private contributions for local roads is included to defeat any argument that such contributions detract from their status as public roads and hence liability for the interdicts applying to public roads. Private roads are not publicly owned, although there are rights of way for the public. The Digest provides:

"Ulpian, Edict, book 68: …21. We call a road public if its land is public. For our definition of a private road is unlike that of a public road. The land of a private road belongs to someone else, but the right of going and driving along it is open to us. But the land of a public road is public, bequeathed or marked out,

---

[44] CIL, Vol I, 2nd ed, No. 594 and Vol. II, Supplement No 5439; trans. Lewis, Reinhold 1990a, 456.

[45] Chevallier 1976, 66, 82.

[46] Twelve Tables, Table VIII, Law VIII; trans. Scott 1932, 73.

[47] Theodosian Code, Book VIII, Titles 5 and 6; trans. Pharr 1952, 194–205.

[48] Justinian, Digest, Book 43.7.3; trans. Watson 1985.

with fixed limits of width, by whoever had the right of making it public, so that the public might walk and travel along it. 22. Some roads are public, some private, some local. We mean by public roads what the Greeks call royal, and our people, praetorian or consular roads. Private roads are what we call agrarian roads. Local roads are those that are in villages or lead to villages. These some call public, which is true, provided that they have not been established by the contribution of land by private persons. It is different if they are repaired by private contributions; for what is repaired by private contributions is by no means private. For this reason, the repairs may be communal, because the road is for common use and amenity. 23. Roads are understood to be private in two senses. Either they are roads through fields on which a servitude is imposed so that they may lead to the field of someone else, or they are roads leading to fields through which everyone may travel entering from the consular road, when a road, way, or track leads from it to a farmhouse. Those roads which are entered from the consular road and lead to farmhouses or other settlements I should think are public also. 24. This interdict applies only to rural roads, not to urban. For the care of urban roads belongs to the magistrates."[49]

The Digest proceeds to identify a number of circumstances where interdicts, or prohibitory orders by a magistrate, may be granted to remedy a breach of law, similar to a modern injunction.[50] In relation to roads, the Digest provides that interdicts may be granted where work undertaken on a public road causes private damage,[51] where constructing a drain makes a road less fit for use,[52] and causes ponding of water on a road.[53] These interdicts apply not only to current damage but also future likely damage[54], and the concept of making a road worse is defined as meaning impairing its usefulness to traffic, turning a road from smooth to rough, from broader to narrower, or from dry to wet.[55] These interdicts apply equally to imperial roads and local roads as public roads. This can cause some confusion as the categories of roads in terms of tenure differs from the categories for the purposes of management. The Digest treats local roads and imperial roads as equivalent, which they are in terms of legal status *vis à vis* the public, but they are worlds apart in terms of the reality of their construction, management and repair. However, the interdicts demonstrate recognition of the importance of local roads, but at the same time avoiding any financial responsibility for their construction and upkeep.

One of the difficulties raised by the analysis of roads by Ulpian relates to the distinction in Roman property law between ownership and possession. Ownership is the strongest legal title recognised by Roman law, but it was far from absolute, with possession providing an alternative basis for rights in property.[56] Rights to possession were protected by means of possessory interdicts granted by the praetor, a speedy remedy dispensed by a praetor. Allied to possession were public rights of usage, such as usage of roads that were also protected by means of non-possessory interdicts granted by the praetor.[57] Rights of usage of roads could be derived from ownership of land, through servitudes (a form of easement), or by non-possessory interdicts. The implications of the duality between ownership and possession in the case of roads resulted in Ulpian giving emphasis to ownership, but then he was unable to resolve inconsistencies in the case of certain private roads where there may be public rights, and where the land for a local road was provided by a contribution from a private person. He did assert public ownership of local roads when they were made on private lands in the distant past and also where their construction and maintenance were privately funded or undertaken.[58] By leaving a lack of clarity whether some local roads are private due to being situated on lands contributed by private persons and on public rights on private roads, he casts uncertainty on legal access rights and on the availability of non-possessory interdicts for all local roads.

The surveying texts[59] provide a different perspective, concentrating on the issues of importance to landowners and local communities, rather than issue of importance for the magistrates and the law. They emphasise the fundamental differences between imperial roads and local roads, unlike the legal texts, which emphasise that both are public roads with the same legal status. They provide us with an understanding of the respon-

[49] Justinian, Digest, Book 43.8.21–24; trans. Watson 1985.
[50] du Plessis 2020, 79.
[51] Justinian, Digest, Book 43.8.3; trans. Watson 1985.
[52] Justinian, Digest, Book 43.8.26–27; trans. Watson 1985.
[53] Justinian, Digest, Book 43.8.28; trans. Watson 1985.
[54] Justinian, Digest, Book 43.8.31; trans. Watson 1985.
[55] Justinian, Digest, Book 43.8.32; trans. Watson 1985.
[56] Domingo 2018, 147–149; du Plessis 2020, 153 ff.
[57] du Plessis 2020, 79.
[58] Palma 1982, 853–865.
[59] Guillaumin 2005, 2010, 2017.

sibilities for construction and maintenance of local roads in rural areas, with an imprecise and flexible allocation of responsibilities between the *pagus* (the local community and an area), groups of landowners, and landowners of fields adjoining the local road. It appears that this lack of clarity for responsibilities enables contributions to be extracted from those who most need the local roads and from those who would most benefit from their construction and improvement, a sort of user pays system levied against those with the capacity and/or the need.

Siculus Flaccus wrote:

"There are public thoroughfares, which are maintained at public expense and bear the name of the men who initiated them. They have curators and are maintained by contractors. For the maintenance of some roads a set sum is regularly extracted from landowners. By contrast, local roads, which turn off the public highways into the fields and often lead back to other public highways, are maintained in a different way, by *pagi*, that is, by the officials of the *pagi*, who normally demand labour from the landowners for their upkeep. Or, as I discovered, set lengths of road running through individual fields, are assigned to each landowner, which they maintain at their own expense. They even have inscriptions erected at specified intervals, recording which owner of which piece of land is responsible for which length of road."[60]

The result of this shifting and uncertain allocation of the responsibility for local roads (in contrast to the clear responsibility for imperial roads) is that the local roads would be of variable quality and standards, depending on needs and the capacity to pay, and usually constructed in a least cost budget manner, rather than the high standards used for imperial roads. However, the lack of clarity in the responsibilities for the maintenance of local roads, other than a clear abnegation of any responsibility by the central State, had the advantage of giving local authorities flexibility to obtain negotiated or mediated outcomes depending upon user needs, plus the ability to pay by landowners, local communities, and users.

It should be noted that roads are to be distinguished from a track or path due to their capacity to permit the passage of vehicles. In addition to roads, paths and tracks provided important transport routes for persons on foot, persons riding animals and pack animals. In the surveying text *De Agris* it is stated:

"A road is a place suitable for vehicular traffic, and gets its name from the movement of vehicles. It has two tracks for the movement going and coming. The word *strata* (applied to a road) suggests a roadway well worn by people's feet. It is also called a *dilapidateata*, that is laid out with stones. A highway is a road raised on an eminence by piled up stones that historians call a military road."[61]

Palma considers the surveying sources provide an analysis of the varying types of roads that is both eminently practical in nature and comprehensive, while the legal sources are enmeshed in legal dogma and artificial principles.[62] This is perhaps too harsh a conclusion, given the role of non-possessory interdicts to generally provide the rights of public usage irrespective of the formalities of ownership and title.

Indicators of a Roman road

There are a number of indicators of the existence of a Roman road. These fall into groups under the headings of inscriptional / textual, cartographic, locational, landform, surface physical indicators, and subsurface physical indicators.

Inscriptional / Textual Indicators: Ancient itineraries, textual references and inscriptions and their find spots may indicate the presence of a Roman road.

Cartographic Indicators: Roman roads were often built to fit into the pattern of centuriation of fields and to provide the boundaries of land parcels.[63] In locations where the land subdivision pattern has remained relatively static, early modern maps and place names can provide clues to the location of Roman roads.[64]

Locational Indicators: As a road serves to link one or more destinations, the existence of two or more settlements can suggest a road linking them. This is more straight forward in the case of the imperial roads that link major centres. However, this can also apply for local roads, where the existence of a line of settlements indicates the potential for a road to link them together.

Roman roads are preferentially located on higher ground, both in terms of overall security from bandits, but also for providing good drainage.[65] Road construction

[60] Siculus Flaccus, trans. Campbell 2000, 113, lines 15–25; Guillaumin 2010, 45, para 27.

[61] *De Agris*, trans. Campbell 2000, 273, lines 32–37.

[62] Palma 1982, 874–877.

[63] Chevallier1976, 82; Margary 1967, 511.

[64] Bagshawe 1979, 14.

[65] Bagshawe 1979, 14.

from its earliest times favoured river valleys, but out of the reach of floods.[66] Additionally, where appropriate, they utilised pre-existing roads and paths.[67]

Surface Physical Indicators: The location of roads can be indicated by cuttings in sloping and mountainous terrain. Roman road builders were acutely aware of the impacts of water and drainage on roads. This resulted in the technique of excavating a drainage ditch on either one or both sides of the road and piling up the excavated material to provide the road route. This excavated pile is called the "*agger*", and together with ditches on one or both sides of the *agger* are key indicators of the existence of a road.[68] These may be indicated by patterns on remote sensing and topographic features identified in field survey.

Subsurface Physical Indicators: The anatomy of a Roman road has been regularly but erroneously described using the four layered approach outlined by Vitruvius for the construction of a pavement in a building.[69] This four-layered approach provides for the following layers from the surface downwards:

1) *Pavimentum*: Surface layer of blocks of stone.
2) *Nucleus*: A layer of finely crushed pottery and lime.
3) *Rudus*: A layer of crushed stones with lime mortar.
4) *Statumen*: A layer of rammed rubble of hand sized stones.[70]

However, there is no evidence that this was the case and the archaeological evidence does not support this four-layer anatomy of a Roman road.[71] More generally, the evidence suggests one or two base layers to spread the load (base and sub-base) and a surface layer. The surface layer is not always paved.

Chevallier notes that "…no construction can be regarded as typical"[72] for Roman roads. In essence Roman road builders optimised the use of materials at hand, particularly in low budget road works, generally on local roads.

The fundamental key to Roman road building was drainage, with side ditches diverting surface waters from reaching the road, building up the road on an *agger* to keep it away from surface flow and groundwater, shaping and compacting the sub-grade of naturally occurring material, using well drained and compacted materials for the sub-base (the load bearing layer), using compacted and bound material for the base (to provide structural integrity), employing a surface layer cambered with a slightly convex or arched shape of the cross-sectional geometry to shed rainfall to prevent infiltration that would weaken the base and sub-base, and, in marshy areas, building the road on a raised timber corduroy.[73]

The best description of road construction is contained in the poem *Silvae* by Statius (Publius Papinus Statius) written in praise of Emperor Domitian as follows:

"The first task here is starting work on trenches, cutting out a track, and digging deep within the ground; soon, it is putting other fill back in the ditches drained of soil, where the road's humped back will nestle, so the ground will not keep swaying, so the spiteful site won't provide an unstable bed for pavement when it bears the weight of traffic; then, it's holding the roadway tight with blocks rammed down to shore both sides and frequent posts to mark the curbs. So many hands work all at once! Some strip mountains by felling woods, some smooth the blocks and beams with tools, others mortar the stones in tight with lime from kilns and dark tufa. These handle draining thirsty pools and channel smaller streams far off."[74]

These indicators of the presence of a road are less noticeable and more difficult to discern in the case of local roads, which were not the product of the central State administration, but a mix of contributions from adjoining landowners and local village and community efforts, usually on a low budget. The result is highly variable standards of road construction for local roads. Laurence has suggested that as local roads were constructed by local communities, they would have lacked the large-scale resources of the Roman state for their building and maintenance, but, given their importance to local communities, more attention may have been paid to their upkeep.[75] As a result, local roads sit more lightly on the landscape and their remains today can be inconspicuous and indistinct. This often proves a challenge in field surveys where the evidence for local roads is subtle, indirect and inferential. The key in sur-

---

[66] Chevallier1976, 198.

[67] Bagshawe 1979, 14.

[68] Bagshawe 1979, 15; Davies 2002, 33–35.

[69] Vitruvius, The Ten Books of Architecture, 7.1.3, trans. Morgan 1960, 202–204; Chevallier 1976, 86; Davies 2002, 55; von Hagen 1967, 35.

[70] Chevallier 1976, 86; Davies 2002, 55.

[71] Chevallier 1976, 55; Davies 2002, 36; von Hagen 1967, 35.

[72] Chevallier 1976, 86.

[73] Chevallier 1976, 87–90; Lay et al. 2021, 13–35.

[74] Statius, Silvae 4.3, 48–68; trans. Nagle 2004, 129.

[75] Laurence 1999, 62.

face surveys is usually the presence of a linear band of stones, brick and tile fragments, pottery fragments and mortar.

As Magary noted:

"The inclusion of minor roads is always a difficult problem that can often be solved only by consideration of evidence of alignment, relation to Roman occupied sites, and constructional details."[76]

Codrington gave a salutary warning of the need to curb enthusiasm in the search for Roman roads, noting:

"… it seems best to refrain from conjecture as much as possible, and to follow the roads as far as there is evidence available for tracing them."[77]

Inscriptional and textual indicators of a local road south-east of Sirmium

Thus far no direct inscriptional and textual indicators of a local Roman road south-east of Sirmium has been identified. However, information about large suburbs of Sirmium that needed to be connected to the city indirectly suggest the existence of local communications outside of the city walls.

In the 230s Philostratus, in his "Lives of the Sophists", gave a brief description of Sirmium in the context of a trial of a politician, senator and sophist Herodes Atticus that occurred in the summer of 170, while Emperor Marcus Aurelius was in the city.[78] Philostratus gave account of the surroundings of the city with numerous towers and half-towers (*πύργοι, ἡμιπύργια*) that were erected in the suburbs.[79] Kovács interpreted these facilities as villas around Sirmium, in one of which Herodes Atticus was accommodated.[80]

One such place near Sirmium was also described by an anonymous author of the *Epitome de Caesaribus,* written in the late 390s, who mentioned that Emperor Maximian Herculius built a palace next to the city; the archaeological remains of which were found at the site of Glac, south-east of the city:

"For even now, not far from Sirmium, there is a spot prominent because of a palace (*palatio*) constructed there, where his parents once worked wage-earning jobs".[81]

The palace found at Glac was likely mentioned by Ammianus Marcellinus as well; in his *Res Gestae* written in the 380s in the context of the victory of Constantius II over the Quadi and Sarmatians in 358, he noted that the emperor delivered a speech to the army in a military camp (*tentoria*) near Sirmium and then he had two days rest in a palace (*ad regiam*) before he entered the city.[82] Marcellinus also mentioned large suburbs of Sirmium in the context of the arrival of Julian the Apostate to the city from Bononia, in 361:

"And advancing with rapid steps, he had no sooner come near the suburbs, which were large and extended to a great distance…"[83]

What is also significant is the existence of land surveyors or field-measurers in Sirmium whose job included the building and maintenance of roads. The profession of *agrimensor* in and around Sirmium was mentioned in both literary and epigraphical sources. In the work of Ammianus Marcellinus a field-measurer was noted as participating in a campaign of Constantius II against the Sarmatians in 359 at ancient Acumincum (modern Slankamen) on the Danube *Limes*, with the Roman army coming from its military base in Sirmium.[84] Another mention of a land surveyor in Sirmium was found on a Jupiter altar found in Sremska Mitrovica and dated to the 2nd century.[85]

The existence of a local communication route along the left bank of the Sava river in Antiquity was also implied in the existence of a large canal built by the emperor Probus (276–282) that flows into Sava at Jarak. This was recorded by Aurelius Victor in 361, and in the *Historia Augusta* in the 390s, with the canal identified as the present-day Jarčina Channel.[86] The importance of the canal suggests its mouth was likely connected by land to Sirmium.

Cartographic indicators of a local Roman road south-east of Sirmium

An overview of the early modern maps showing the area between Sremska Mitrovica and Jarak show

---

76 Magary 1967, 5.

77 Codrington 1918, v.

78 Philostratus, Lives of the Sophists, II.1 [559–560]; Wright 1952, 166–170.

79 Philostratus II.1 [560]; Wright 1952, 168, 169.

80 Kovács 2009, 233.

81 Epitome de Caesaribus XL.10; Banchich 2018;

82 Ammianus Marcellinus, Res Gestae, XVII.13.33; Rolfe 1935, 400, 401.

83 Ammianus Marcellinus, Res Gestae, XXI.10.1; Rolfe 1940, 133.

84 Ammianus Marcellinus, Res Gestae, XIX.11.1–8; XIX.11.17; Rolfe 1935, 523–529, 533.

85 Mirković 2017, 76, 172, 173 [L'Année épigraphique 1994, 01424].

86 Aurelius Victor, Liber de Caesaribus XXXVII; Historia Augusta, The Life of Probus XXI.1–4; Црнобрња 2015, 200, 201; Dimitrijević 1969, 83; Mirković 2017, 47.

that several old roads existed both along the lip of the left Sava river terrace and in the flood plain. A map from 1780 clearly shows that the road to Jarak at the time followed the lip of the river terrace, and the present-day straight road to Jarak located at a distance from the edge of the river terrace was first shown on a map produced in the 1860s and then in a map from the 1870s.[87]

From the former mouth of the Čikas Canal (south-east of the Leget Port) the road split in two:

1) the southern road traversed from the river terrace into the flood plain and along the river next to an 18th century watchtower "Ch. Belli Brieg" (in the southern end of the industrial zone and 450 m north-west of the Glac Creek West Field site (Glac–zapad), WGS84: 44°57'20.82"N 19°39'24.47"E);

2) the northern road followed the lip of the river terrace, passing through the site of Glac and further to the south-east to Jarak.[88] The area with the sites of Glac Creek West Field, Glac, Glac East Field (Glac–istok), Leget-Ribnjak, and Vrbica was named in the 1860s map as "Meterice" (a ditch, a wall).[89]

The 18th century road that traversed along the lip of the river terrace was still visible in a map produced almost a century later, but only in sections; northwest of the still existing toponym at the time "B. B." ("Belli Brieg" watchtower), and in the southern periphery of Jarak along the river where a bridge over the Jarčina Channel was shown.[90]

This road was rudimentary and not engineered as the later straight road to Jarak, but adjusted to the topography. Along with the toponym that echoed the existence of a ditch and/or a wall stretched along the lip of the river terrace, the location of the 18th century road may indirectly suggest the access pattern for the area in pre-modern times.

Settlements along the Sava left bank

A string of settlements existed in Antiquity along the left bank of the Sava river. While the Sava itself would have been a major transport corridor connecting settlements on the river bank downstream of Sirmium, the existence of a road on the left river bank may be inferred from the following factors. First, the *via militaris* was constructed during the Roman occupation of the area after its conquest by Tiberius during the reign of Augustus. Hence, the *via militaris* or roads linking to it could not have formed the basis for land transport between settlements downstream of Sirmium before the Roman conquest. The existence of a line of settlements along the left bank of the Sava in pre-Roman times points to the existence of some other road to provide access to those settlements in addition to river transport. At the north-western end of the area under consideration is Sirmium itself. Our knowledge of pre-Roman occupation of Sirmium is poor, with Mirković describing traces of pre-Roman settlement as "very scant and unreliable", although there are hints of Iron Age finds.[91] At the south-eastern end of the area under consideration lies the tell of Gomolava, situated on the left bank of the Sava river, 3 km from Jarak and near the village of Hrtkovci. The tell of Gomolava has a long history of human occupation during the late Vinča period, the Eneolithic, the Early Bronze Age and the Iron Age, and a large Roman necropolis, with the dominant horizons from the Iron Age.[92]

Between the bookends of Sirmium and the mouth of the Canal of Probus found in Jarak, the Glac Survey team (2017–2021) and earlier researchers have identified a number of locations with evidence of occupation in both pre-Roman and Roman periods on the left bank of the Sava river. These are indicated in the table below (Table 1).

This string of settlements in pre-Roman periods were, in all likelihood, linked by a road following the left bank of the Sava river. Their continued occupation in Roman periods suggests a continuity of access patterns, despite the construction of the *via militaris.* Such a road was not a *via militaris,* given the lack of reference to any such roads in the Antonine Itinerary, the Peutinger Table, the Bordeaux Itinerary and the Ravenna Cosmology, or any other epigraphic source. This indicates that any such road did not hold the status of a *via militaris.* As it serviced too many locations to be a private road, it would have been a local road, a *via vicinalis*.

There is one settlement location identified by the survey team that is not part of this string of settlements following the left bank of the Sava river, that of Šašinačke Međe Rakić Farm (Rakića salaš) (WGS84: 44°57'21.37"N 19°41'11.95"E). This location is 1.3 km northwest of the likely line of the local road following

---

[87] Kantonai felmérés I. 1763–1787; Kantonai felmérés II. 1865–1869; Kantonai felmérés III. 1872–1884.

[88] Kantonai felmérés I. 1763–1787.

[89] Kantonai felmérés II. 1865–1869.

[90] Kantonai felmérés III. 1872–1884.

[91] Mirković 2017, 15.

[92] Tasić, Petrović 1988; Jovanović, Jovanović 1988; Dautova-Ruševijan, Brukner 1992.

LOCATION NAME	SETTLEMENT TYPE	CULTURE-CHRONOLOGICAL ATTRIBUTION	REFERRENCES (alphabetical)
Kalvarija WGS84: 44°58'14.85"N 19°37T9.03"E	Village/ Fortification/ Suburb of Sirmium	Neolithic (Starcevo-Körös, Vinča) Bronze Age (Belegiš, Urnfield) Early Iron Age (Hallstatt D/Srem Group) Late Iron Age (La Tène) Roman	Милошевић 1994, 17–18 Милошевић 2001, 13–14 Popović 1963, 63–64 Popović 1978b, 2 Василић 1952, 168
Customs Complex (Keller/Skribanek/Marušić) WGS84: 44°57'56.87"N 19°38'3E47"E	Suburb of Sirmium	Roman	Miladinović-Radmilović, Radmilović 2015, 82, 83, 155, 156 Милошевић 2001, 34, 35
Glac Creek West Field (Glac-zapad) WGS84: 44°57'9.13"N 19°39'44.18"E	Village/ Rural Homestead/ Palace annexes	Neolithic (Starčevo, Vinča) Eneolithic (Vinča) Late Bronze/Early Iron Age (Gava) Early Iron Age (Bosut-Kalakača) Late Iron Age (La Tène) Roman Late Medieval/Early Modern	Glac Project 2019b
Glac WGS84: 44°57'4.79"N 19°39'53.97"E	Rural Homestead/ Palace	Neolithic Late Iron Age (La Tène) Roman	Glac Project 2019a Glac Project 2019b Popović 1978b, 3
Glac East Field (Glac-istok) WGS84: 44°57'E91"N 19º40'5.86"E	Rural Homestead	Late Iron Age (La Tène) Roman	Glac Project 2019b
Leget - Ribnjak WGS84:44°56'39.71"N 19°40'51.84"E	Rural Homestead	Neolithic (Starčevo, Vinča) Roman	Glac Project 2019b Милошевић 2001, 13 Popović 1964, 2, 3
Vrbica WGS84: 44°56'33.60"N 19°41'3.70"E	Village/ Extended Rural Homestead	Neolithic (Starčevo, Vinča) Eneolithic (Kostolac, and atypical fr.) Bronze Age Late Bronze Age/Early Iron Age (Gava) Early Iron Age (Bosut-Kalakača) Late Iron Age (La Tène) Roman Late Medieval/Early Modern	Glac Project 2019b Popović 1964, 2, 3 Popović 1967a Popović 1978a, 1
Leget North-East (Leget-severoistok) WGS84:44°56'6.11"N 19°41'41.52"E	Rural Homestead	Neolithic (Starčevo, Vinča) Eneolithic Early Iron Age (Bosut) Late Iron Age (La Tène) Roman The Gepid Kingdom (5th Century) Medieval	Glac Project 2019b
Aluga WGS84: 44°55'22.50"N 19°43'11.04"E	Village	Neolithic (Starčevo, Vinča) Eneolithic (Coțofeni - Kostolac, Çernavoda III, Kostolac, Baden, Rec-Gajari Culture, Vučedol) Bronze Age (Verbiçoara) Late Bronze Age/Early Iron Age (Gava) Early Iron Age (Bosut-Kalakača) Late Iron Age (La Tène) Roman Early Byzantine Medieval	Glac Project 2019b Popović 1969–2017 Popović 1969a, 2, 6 Popović 1969b, sheet 2 Popović 1969c, 250, T. 74, 75
Turijan WGS84:44°55'8.46"N 19°44'24.23"E	Rural Homestead	Neolithic (Vinča) Eneolithic (Vinča) Bronze Age Early Iron Age Late Iron Age (La Tène) Roman Early Medieval	Glac Project 2019b Popović 1969–2017 Popović 1969a, 1 Popović 1969b, sheet 1, 2 Popović 1969c, 250 Popović 1981
Karaula WGS84: 44°54’52.58"N 19°44'57.56"E	A single building	Roman	Popović 1979 Popović 1969–2017
Kozlovac WGS84: 44°54’48.56”N 19°46'10.36"E	Rural Homestead	Late Iron Age (La Tène) Roman	Popović 1969–2017 Popović 1969a, 4, 5 Popović 1969c, 251
Simate WGS84: 44°54’42.35"N 19°46'16.32"E	Rural Homestead	Roman	Лучић, Муждека 2012 Popović 1969–2017 Popović 1969a, 5, 6 Popović 1969c, 251

Table 1. Pre-Roman and Roman settlements along the left bank of the Sava river, between Sirmium and the mouth of the Canal of Probus

Табела 1. Прерѝмска и римска насеља дуж леве обале Саве од Сирмијума до ушћа Пробовоī канала

the Sava and 1.2 km south of the imperial road linking Sirmium to Bassianae.

Columella in *De Re Rustica* advises to avoid locating a villa adjoining an imperial road: "…the highway, moreover impairs an estate through the deprivations of passing travellers and the constant entertainment of those who turn in for lodging. For these reasons, my advice is to avoid disadvantages of this sort and place the villa neither on a highway, nor far from a highway…"[93]

It is currently unclear whether Rakić Farm was connected to the local road or the imperial road, or both. The risks and inconvenience posed by freeloading visitors presumably would arise from an important local road as much as an imperial road. Its location away from the two principal roads in the area suggests it was a high-status villa, as opposed to a rural farmstead.

In addition to this site, another two locations away from the lip of the river terrace and further south-east of Rakić Farm were surveyed in 2019 and 2021 by the Glac Survey team;[94] and these were also surveyed back in the 1960s.[95]

These were located north of the lip of the river terrace; Čelepovac Vodenčine (WGS84: 44°56'42.86"N 19°41'28.11"E) 600 m north-east of the Vrbica site, and Crkvice (WGS84: 44°55'59.06"N 19°43'51.91"E) 1.4 km north-east of the Aluga site, with both sites yielding only scarce finds of archaeological material. At Čelepovac Vodenčine: Neolithic (Starčevo), Early Iron Age (Bosut–Kalakača), and Roman finds; at Crkvice only scarce Roman finds.

These were interpreted as sites with Roman period, modest, rural huts and were likely connected to the settlements closer to the river with simple pathways.

Environmental features along the Sava river

There are a number of environmental features of the likely road area along the Sava river that provide a guide to its location and likely features identifiable in a field survey.

The likely location of the local road as determined by linking the string of settlements located between Sirmium and the Jarčina Channel is in land system 3: Lowlands, comprised of materials of mainly Quaternary age, predominantly silt-clay with some possible sand and/or gravel intercalations and at the southern edge of Unit 1: River terrace in that land system adjoining Unit 2: Sava alluvial plain. The river terrace land system unit is comprised of chernozems of various types, slightly brown coloured, limeless, and with signs of gley (sticky, poorly drained and water-logged soil). The Sava alluvial plain land system unit is comprised of alluvial, loamy and swampy soil, and hydromorphic black limeless soil.[96] The soils of the Sava alluvial plain land system are not suitable for road construction due to their plasticity and the area is prone to flooding.[97]

This entire area along the Sava river, between Sremska Mitrovica and the Jarčina Channel, has no naturally occurring surface rock outcrops and is 20 km south of the nearest surface outcropping of rocks in the Fruška Gora ridge. As a result, stone is not readily available for a road sub-base or surface pavement and its transport to this location for the construction of a local road would have been expensive, militating against its widespread use in local road construction. The absence of nearby naturally occurring surface rock influences the likely surface indicators of a local road discernible during field surveys.

The string of settlements and the likely location of the local road from Sirmium to the Jarčina Channel occupy a particular geomorphic feature, namely a natural levee, a slightly elevated band generally parallel to the alluvial plain and comprised of a coarser sediment size.

The formation of natural levees is explained by Hudson as follows:

"Natural levees are formed by the process of overbank flood sedimentation. … Upon exiting the channel and flowing onto the floodplain there is an abrupt reduction in flow velocity, which results in immediate deposition of coarser sands and silt, which is transported along the floodplain surface as bedload. … At the distant margins of natural levees, slack-water deposition of clay is the dominant mode of sedimentation".[98]

At intervals along a flood levee, sloughs permit the eventual draining of floodplain inundation back to the main river channel itself. Natural levees are generally larger on the abrading bank of a meandering or curved river and smaller on the inside of river bends.[99]

A natural levee is present on the left bank of the Sava river between Sirmium and the Jarčina Channel and for this distance the left bank is on the outer abrading

93 Columella, *De Re Rustica* 1.5.6, trans. Boyd 1941, 63.
94 Glac Survey 2019b;
95 Popović 1967a; 1967b, 2; 1969a, 1, 2; 1969c, 250.
96 Ćalić et al. 2018–2020.
97 Lay et al. 2021, 27–29.
98 Hudson 2007, 1–2.
99 Hudson 2007, 1–2.

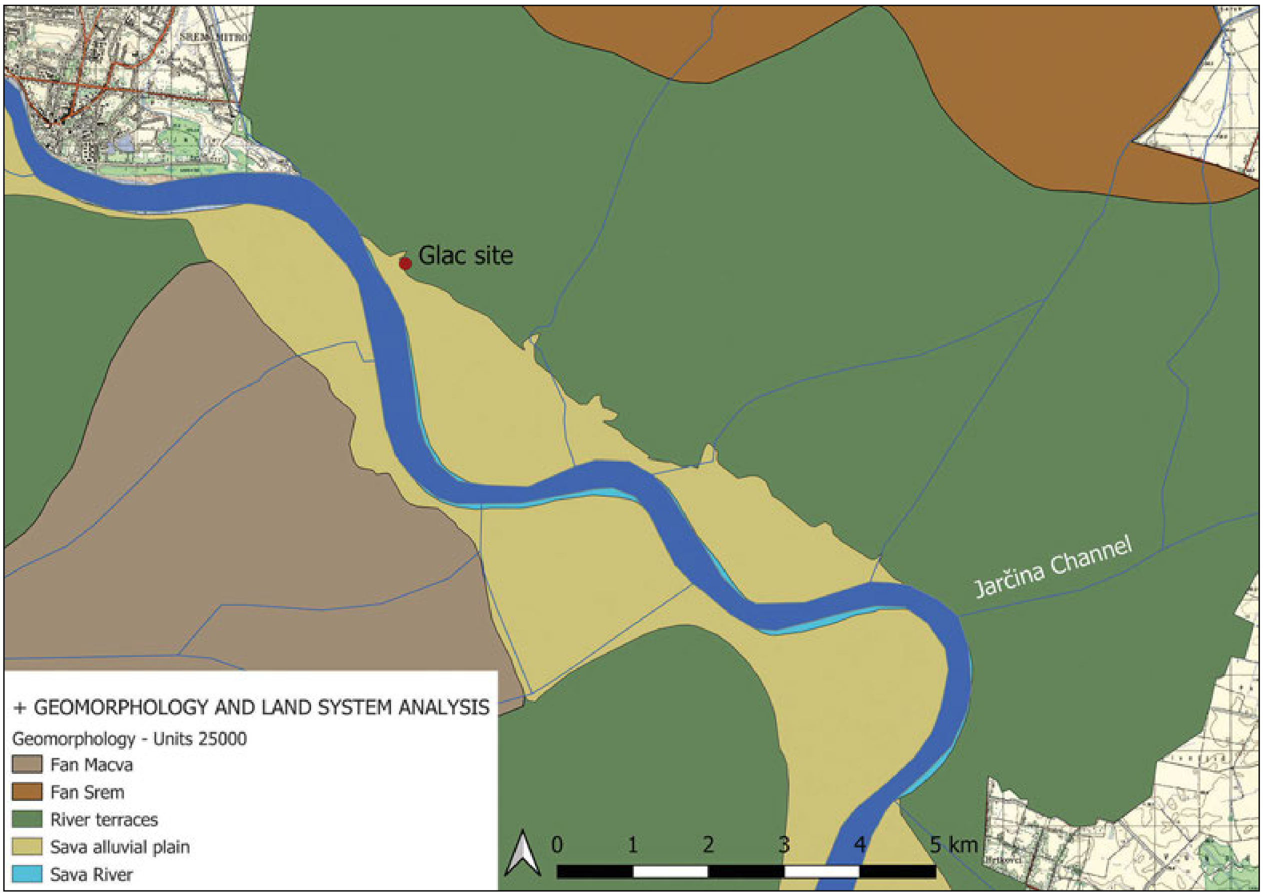


Fig. 4. Geomorphological land system units along the left bank of the Sava river, between Sirmium and the Jarčina Channel

Сл. 4. Геоморфолошке јединице дуж леве обале Саве између Сирмијума и канала Јарчина

edge of a broad curved sweep in the river, within which there are smaller curves. The levee is present as a noticeable lip on the edge of the river terrace with the land sloping slight downwards further away from the river. This natural levee is the location for the settlements identified by the survey, with the exception of Aluga, which intrudes into the Sava alluvial plain. The natural levee is also the likely route of the local road.

The natural levee not only forms a naturally occurring *agger* on which to construct a road, but the presence of coarser sediments provides a preferable material for the construction of a road sub-base and base, only requiring the addition of stone, brick/tile and pottery fragments, and lime mortar. Along the course of this natural levee, there are sloughs that, in modern times, have been excavated to form substantial drains at Glac Creek (Glac kanal / Crepovački kanal), Mančelov Gat and near Aluga. Prior to the modern excavation of these sloughs to form drains, they were shallow swales with ephemeral inundation from hind swamp drainage, generally not requiring bridging, but in all likelihood a simple ford.

Remote sensing and field surveys

The Glac Survey Project commissioned LiDAR images and low-level colour aerial photographs of the area on the left bank of the Sava river from the eastern edge of Sirmium to the western edge of Jarak village. This covered the entire undeveloped edge of the alluvial terrace land system unit. These remote sensing methods, together with publicly available air photos and Google Earth were examined to identify traces of the natural levee on the left bank of the Sava river. The natural levee could be identified from the Glac East Field site through to site of Turijan sitting on the lip of the river terrace land system unit and providing the *agger* for

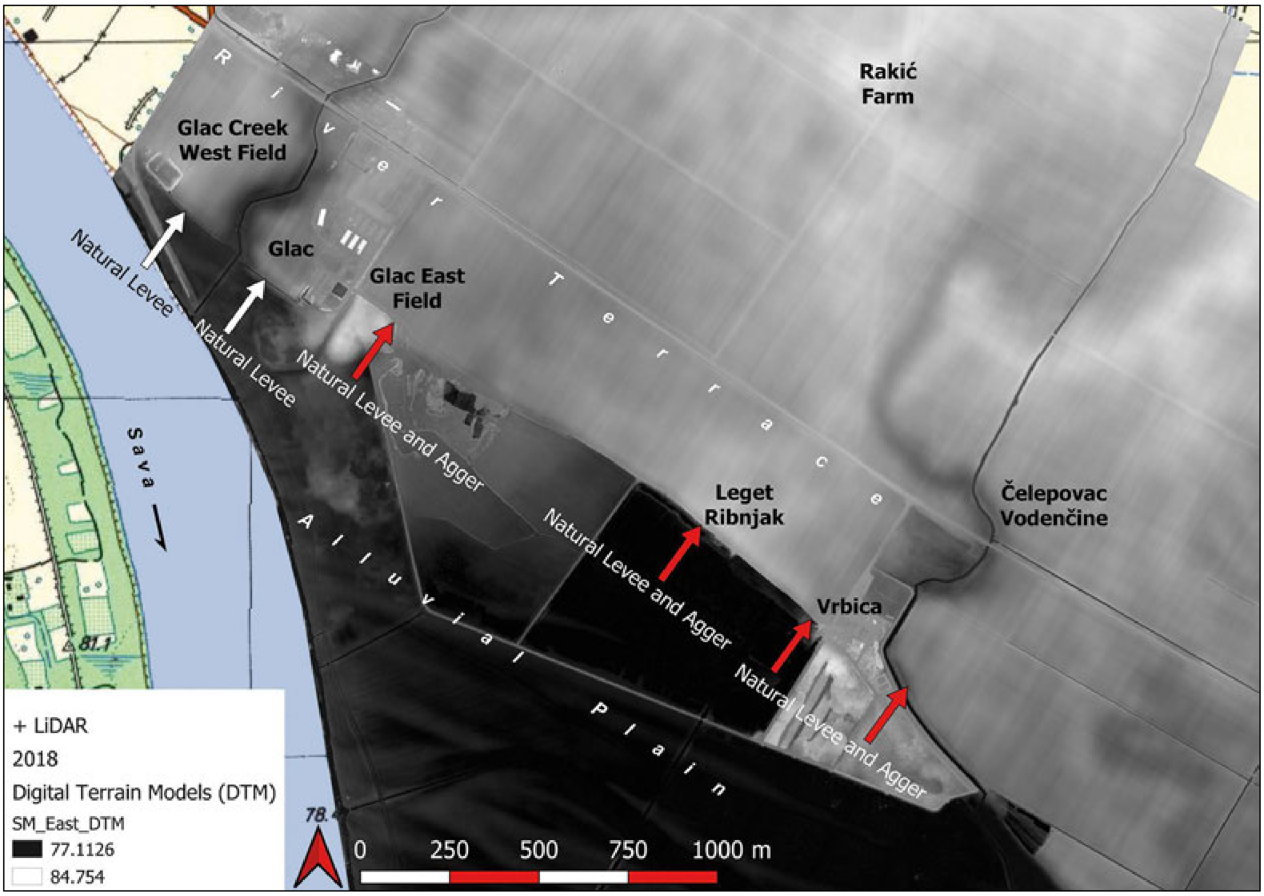


Fig. 5. Natural levee of the Sava river terrace, between Glac and Vrbica (LiDAR, Digital Terrain Model)

Сл. 5. Природна ивица речне шерасе Саве између Глаца и Врбице (LiDAR, Digital Terrain Model)

the local road, except for the deviation into the alluvial plain at Aluga, a small intrusion into the alluvial plain at Leget Northeast (Leget-severoistok), and a gap at Mančelov Gat where the regional waste depot has altered the landform. Today, the *agger* feature is interrupted in places and its width measures between 7 m and 23 m, with the relative height above the upper zone of the flood plain at 0.3 m on average. Constant ploughing with machinery of the fields in the north of the feature for the last seventy years has significantly reduced the height of the *agger* in the area.

Particular attention was paid the area adjacent to the Aluga site, which is 8 km south-east of Sremska Mitrovica and 750 m south of the Jarak road and to a smaller area east of Leget Northeast. In both of these cases the LiDAR scan shows an *agger* leaving the edge of the alluvial terrace and intruding into part of the alluvial plain. The site of Aluga is situated in the alluvial plain land system unit, deep in the flood zone of the Sava river, and not on the likely natural levee of the Sava river. From the Aluga site, the edge of the river terrace land system unit, and probably the natural levee, is 300 m to the north, 800 m to the north-west and 1.2 km to the south-east.[100] Similarly, there is a relatively smaller intrusion into the alluvial plain east of Leget Northeast.

As a result, any local road traversing through the settlement found at the Aluga site could not utilise the natural levee on the edge of the alluvial terrace but would require an artificially raised *agger* for road construction in order to bridge the flood zone between two parts of the river terrace in the higher ground in the south-east and in the north-west. The same applies to the link from Leget Northeast to connect with the adjoining parts of the natural levee and *agger*. In the case

[100] Ćalić et al. 2018–2020.

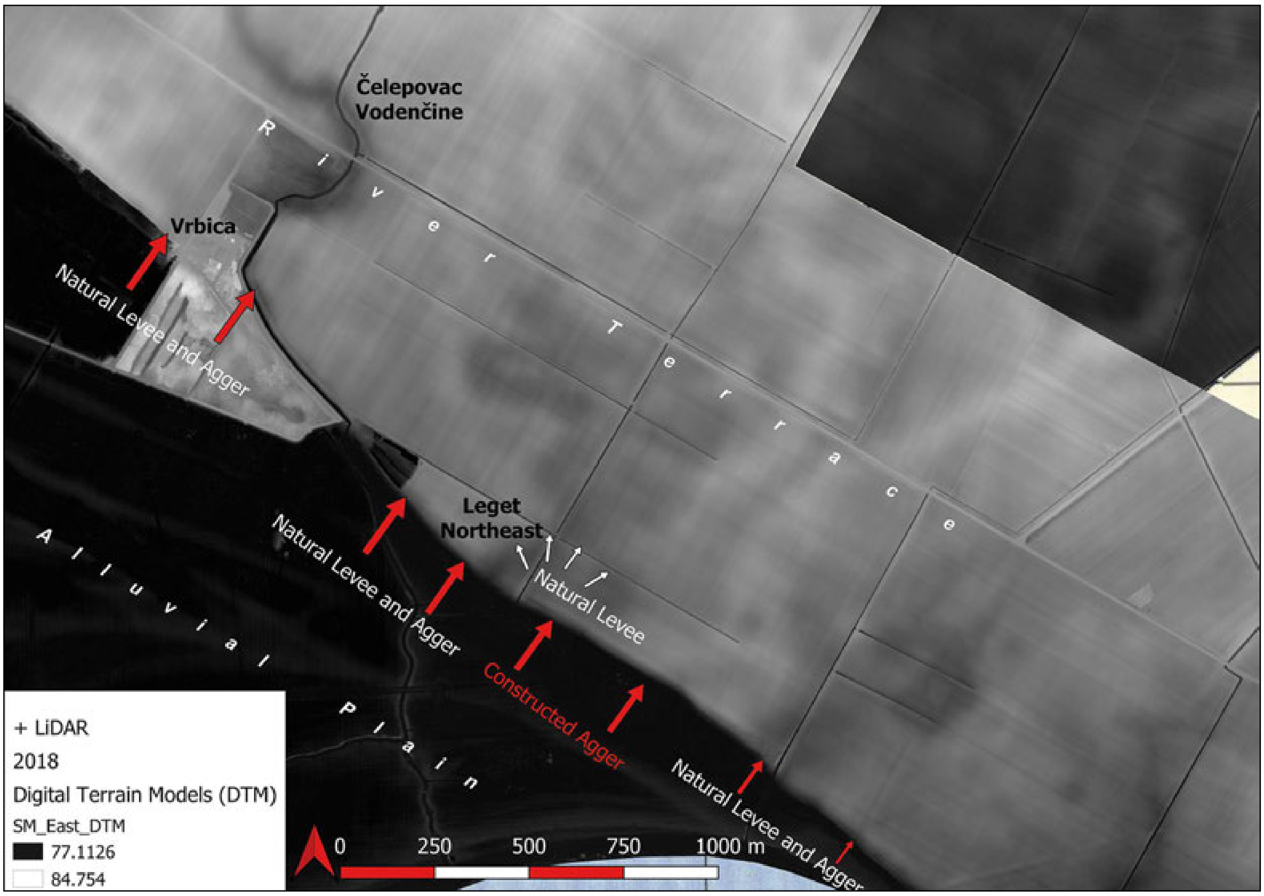


Fig. 6. Natural levee of the Sava river terrace, between Vrbica and Leget Northeast (LiDAR, Digital Terrain Model

Сл. 6. Природна ивица речне ūерасе Саве између Врбице и локалиūеūа Леīеū–североисūок (LiDAR, Digital Terrain Model)

of Aluga and Leget Northeast, natural levees could have formed within the alluvial plain in addition to one along the edge of the alluvial terrace, but the direct connection along the road route indicated at Leget Northeast and the direct connection to and from the settlement tell at Aluga strongly suggests this feature is anthropogenic and not as a result of natural processes.

Aluga is a tell type of settlement surveyed in 2019 and 2021, with cultural material from the Neolithic to the medieval period, with an abundance of Roman finds, mostly brick and tile fragments, lime mortar and pottery. The tell rises 4.5 m above the lower wooded land to the south, and up to 2.5 m above fields in the north, west, and east. Despite the difference in height between the southern wooded area and the northern fields of 2 m on average, the tell occasionally sits surrounded with water in times of larger floods. However, the edge of the inundation area with the tell in the middle is limited by a stretch of higher ground running to the north-west and to the south-east.

Today, the height difference between the river terrace and the flood plain in the area of Aluga is barely visible in the terrain, and becomes clear only along the modern Jarak road. However, the elevated edge between the upper and the lower zones of the flood plain, clearly seen in the terrain with the tell of Aluga being its highest point, looks in fact like a lip of the river terrace. Given the interpretation of the geomorphology of the area,[101] and a dense strip of Prehistoric and Roman cultural material found in large quantities along this edge, the most probable cause of such topography is anthropogenic. That is, the existence of a human constructed *agger* separated the northern and

[101] Ćalić et al. 2018–2020.

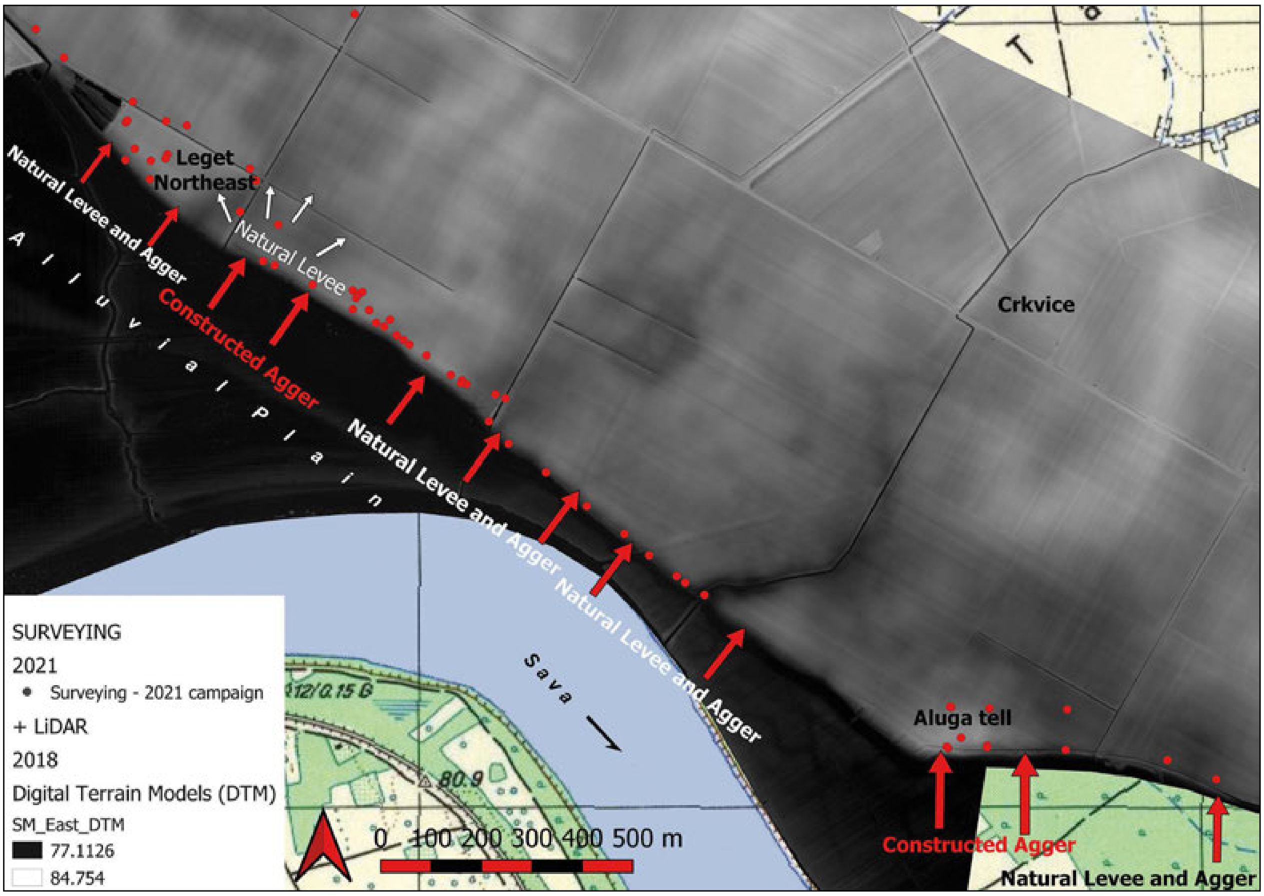


Fig. 7. Sava river alluvial plain, between Leget Northeast and Aluga (LiDAR, Digital Terrain Model) with indicated locations of the Roman cultural material finds along the flood plain levee and the human built agger

Сл. 7. Алувијална раван између локалишеша Лейеш–североисшок и Алуйа (LiDAR, Digital Terrain Model) са назначеним месшима налаза римскоī кулшурноī машеријала дуж изīрађеноī аīера и насийа у йлавној зони

southern zones of the flood plain. As LiDAR scans of the area show, the feature is still visible despite it having been damaged by ploughing in modern times. Unlike the landscape modification done by Probus when constructing the Jarčina Channel in the early 280s,[102] of which literary evidence exist,[103] the landscape of modification in the area of Aluga with an *agger* causing the lift of the flood plain was a *longue durée* process that left no mark in the written records. However, the dense stretch of cultural material along the feature clearly indicates its permanent usage in the past. The same is the case for the area east of Leget Northeast.

The LiDAR scan with hill shading and the local relief model of the area indicates the existence of features interpreted as parts of an *agger* of the road stretched along the edge of the inundation area connecting Aluga to the natural levee. When examining the LiDAR scans, careful attention was given to ensure that any headlands in fields were not misidentified as a possible *agger*. The headlands are an area of a machine ploughed field in which the ploughing is undertaken in a one-way pattern, where the tractor turns around and the turning area is not reploughed. Any ploughing headlands could be misinterpreted as an *agger* where the direction of the plough rows is perpendicular to the supposed *agger*. In areas where the direction of the plough rows is parallel to the supposed *agger*, any ploughing headlands would not be present in a similar location to the sup-

---

[102] Црнобрња 2015, 200, 201; Dimitrijević 1969, 83; Mirković 2017, 47.

[103] Aurelius Victor, Liber de Caesaribus XXXVII; Historia Augusta, The Life of Probus XXI.1–4.

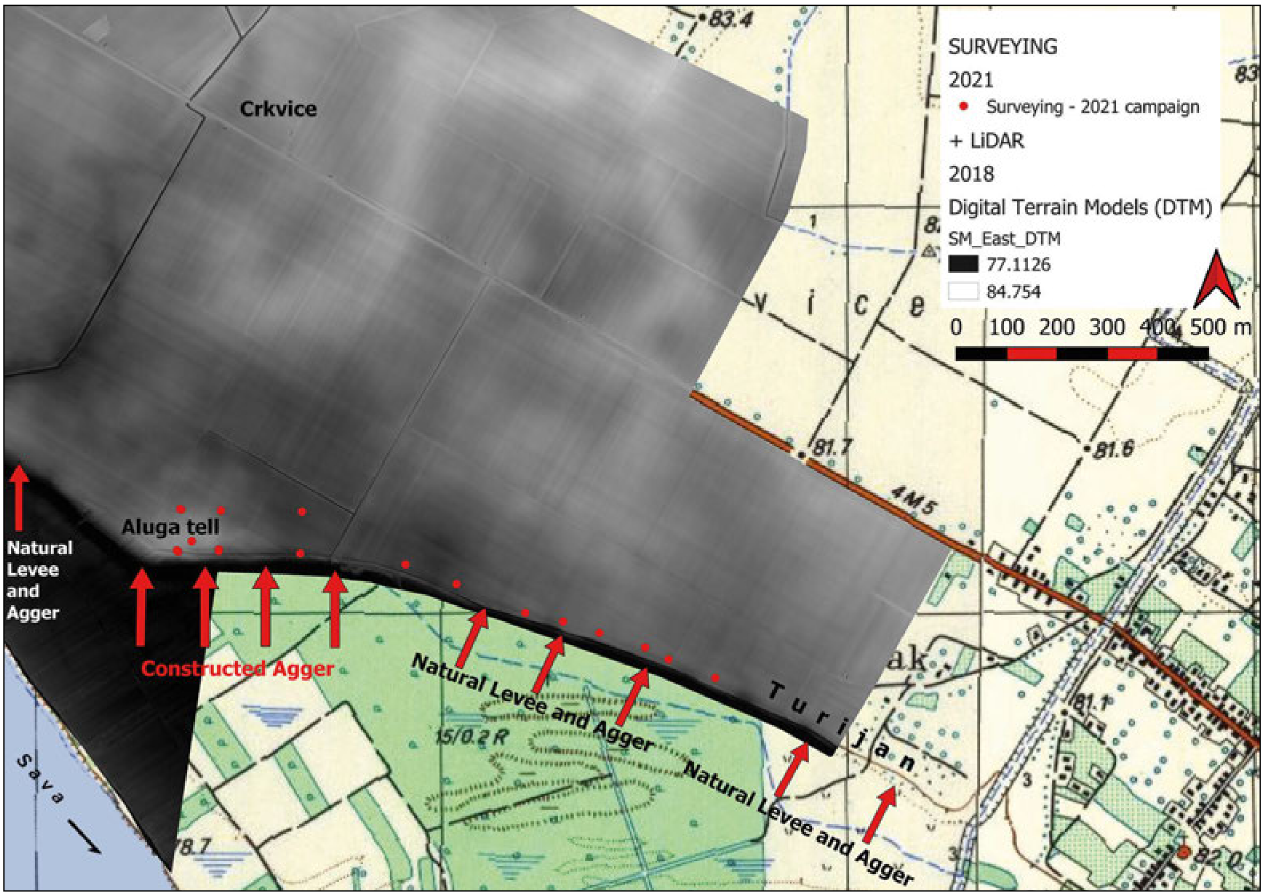


Fig. 8. Sava river alluvial plain, between Aluga and Turijan (LiDAR, Digital Terrain Model) with indicated locations of the Roman cultural material finds along the flood plain levee and human built agger

Сл. 8. Алувијална раван између локалитета Алуга и Туријан (LiDAR, Digital Terrain Model) са назначеним местима налаза римског културног материјала дуж изграђеног агера и насипа у плавној зони

posed *agger.* The LiDAR scan with hill shading and local relief model of the area near Leget North East shows that ploughing headlands are distinguishable from the supposed *agger*, and the *agger* feature is present even when the plough row direction is parallel to the *agger* feature.

Surface archaeological evidence of a local Roman road

Field surveys of the left bank of the Sava river by the Glac Survey team were conducted in 2017, and 2019–2021. Besides the surveys of the settlement sites indicated above, the team traversed the entire length of the lip of the river terrace and a section of the alluvial plain, the stretch between the industrial zone of Sremska Mitrovica and the village of Jarak. Surface indicators of a Roman road in the area were noted. At dozens of places along the way, GPS coordinates of the surface indicators of a local Roman road were recorded.

The surface archaeological indicators of a local road between Sirmium and Jarak will be considered in three sectors:

(a) From Sirmium to Glac.

(b) From Glac to Vrbica.

(c) From Vrbica to Jarak.

(a) From Sirmium to Glac. The imperial road departed from Sirmium at the eastern city gate or “Porta Fossiensis” on an extension to the *decumanus maximus.*[104] At some point the local road and the imperial road diverged. Detailed consideration is given later to the point of divergence of the two roads on the eastern

[104] Dimitrijević, Whitehouse 2021.

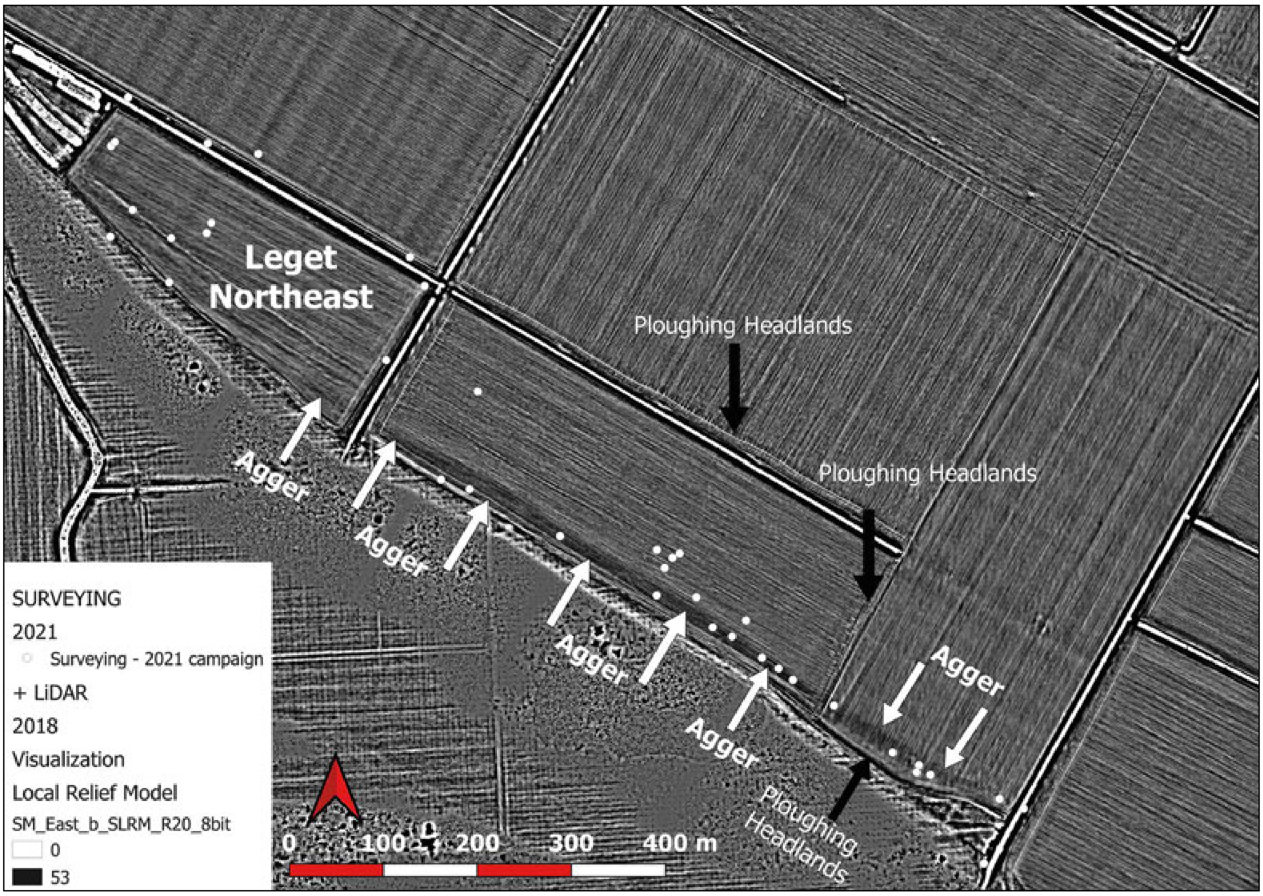


Fig. 9. Human built agger with indicated locations of finds of Roman cultural material south-east of the Leget Northeast site (LiDAR, Local Relief Model)

Сл. 9. Изграђени агер са назначеним местима налаза римског културног материјала југоисточно од локалитета Легет–североисток (LiDAR, Local Relief Model)

periphery of Sirmium. Today, other than the Glac Creek West Field, this section of the route is covered firstly by urban development in the south-eastern part of Sremska Mitrovica and then by the industrial area of the Customs Complex and the Leget Port. The area has been extensively filled to cover the interface between the river terrace and the alluvial plain including the natural levee and line of the local road.

The Glac Creek West Field contains extensive finds of pre-Roman and Roman settlement and is likely to have been a village and an adjunct to the Glac palace. No specific clues have been identified of the road here. To its east, the Glac Creek West Field is separated from the Glac palace site by a modern excavated drain occupying what was a slough in the natural levee. The western façade of the Glac palace is dominated by what appears to be a monumental gate complex.[105] The gate is a faux fortification as it appears the Glac complex was not walled, at least not on the northern side. The gate entry faces the Glac Creek West Field and would probably have been connected by a road to it and then to Sirmium. This may have been the original local road as the construction in the 4th century AD of the Glac palace on the natural levee would have required a northwards diversion of the local road to bypass the palace. The field survey team examined the bed of Glac Creek on 29th June, 2017 and located a Roman brick in the creek bed opposite the gate complex at Glac. This find was not *in situ* and the creek bed had been heavily disturbed during the digging of the channel and, hence, it was not possible to ascertain

[105] Glac Project 2019a.

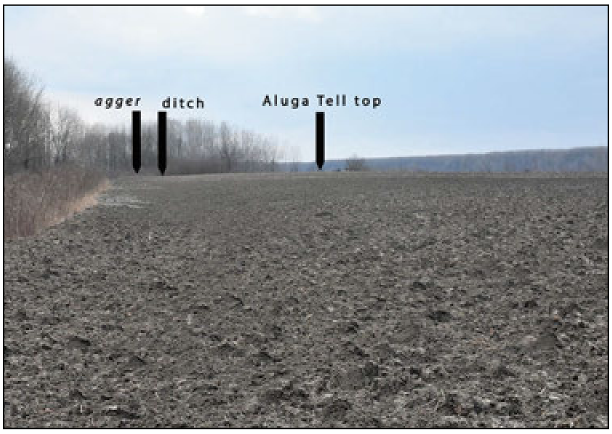




Fig. 10. The Aluga site, looking towards the west at the north-south profile of the tell; from left to right (from south to north) indicated are locations of the human built agger, a ditch, and the top of the tell
Fig. 11. Area north-west of Aluga in the flood plain with human built agger, looking towards the north

Сл. 10. Локалиӣеӣ Алуīа, ӣоīлед ӣрема заӣаду и ӣрофилу ӣела на ӣравцу север–јуī; слева надесно (од јуīа ка северу) назначене ӣозиције изīрађеноī аīера, канала, и врха ӣела
Сл. 11. Поӣес северозаӣадно од Алуīе у ӣлавној зони, изīрађен аīер, ӣоīлед ка северу

whether this was part of a ford on the local road across the slough.

(b) Glac-Vrbica section. On 2nd July, 2017 the survey team examined the entire length of the natural levee on the lip of the flood plain adjoining a field located between the Mitrosrem complex and the regional waste depot on the western side of Mančelov Gat. This field has been extensively ploughed and planted with either wheat or maize.

In the south-western corner of the field, 50 m east of the Mitrosrem complex, a site named Glac East Field was found covering an area of approximately 50 m by 100 m, and was slightly elevated compared to the rest of the field. Surface finds at the site, which was likely a rural homestead, included numerous Roman brick fragments, lime mortar, and fragments of black and grey pottery of both pre-Roman and Roman attribution.

Further to the south-east of Glac East Field, to Leget–Ribnjak, a consistent band up to 50 m wide and 1.4 km in length was found with moderate Roman brick fragments, pottery fragments and mortar fragments. The distribution of material diminished within this band to the north. The area has been extensively ploughed, causing the spread of material from the natural levee northwards in a far wider band than would have been occupied by a Roman road. The rest of the field between the natural levee and the current road between Sremska Mitrovica and Jarak was traversed twice to ascertain whether Roman material was present in the field beyond the band, and no cultural material was located between the 50 m wide band and the modern road. The presence of the cultural material in the 50 m wide band and its absence elsewhere in the field, together with the presence of an *agger* on the natural levee, is best interpreted as the remains of a road.

Next to the Regional Waste Depot Complex, west of the Mančelov Gat Channel and on the lip of the river terrace, the site of Vrbica was surveyed from 24th to 27th February, 2021. The site was partially destroyed in its eastern periphery by the waste depot development. It was originally located on a tell of 100 m in diameter (today flattened by constant ploughing) with a zone around it also included, in total an area of 300 by 200 m. The surface material of the site, which was interpreted as a village, included abundant finds of Roman brick fragments, lime mortar, and pottery pieces of Roman and pre-Roman attribution.

(c) From Vrbica to Jarak. The stretch of the local road from Vrbica to Jarak also contains a ribbon of cultural material on the natural levee. The section of the natural levee from the Leget Northeast location to Aluga was surveyed by the survey team on 3rd March, 2021 and a constant scatter of cultural material of brick / tile fragments, pottery fragments and mortar was found in a narrow band, up to 30 m wide.

The section of the natural levee from Aluga to Turijan was surveyed by the survey team on 11th March, 2021 and a constant scatter of cultural material of brick / tile fragments, pottery fragments and mortar was found in a narrow band, on average 15 m in width.

This is comparable to the finds between Glac and the Mančelov Gat channel. The presence of this material coinciding with the *agger* between Leget Northeast and Turijan is also sufficient to validate the presence of the local road between the sites following the natural levee and an artificial *agger* to Aluga.

Subsurface archaeological evidence of a local Roman road

The subsurface archaeological indicators of a local road between Sirmium and Jarak will be considered in two sectors:

(a) From Kalvarija to Ciglana on the eastern outskirts of Sirmium.

(b) At the Glac – Mitrosrem location.

(a) Kalvarija – Ciglana Sector. Traces of a Roman road were excavated in 1985 in the south-eastern periphery of Sremska Mitrovica in the Palanka area, at the Ciglana site (former brick production facility, "Locality 67") south of the main eastern approach road to the town (WGS84: 44°58'8.80"N 19°37'35.29"E).[106] Also, traces of the Roman road were excavated 130 m west of the brick facility at the so-called "Locality 81" (WGS84: 44°58'10.23"N 19°37'28.55"E), and at four locations further westward in the direction of Kalvarija Hill ("Locality 12").[107] The entire area is today covered with modern development.

The road was located along the lip of the left-hand side of the Sava river terrace, north of Jalija Pond.

The structure of the Roman road section excavated at Ciglana included the use of crushed stone and brick of different sizes and shapes.[108] Traces of mortar on the road were not described, but the use of lime mortar may be surmised on the basis of a photograph of the structure published, with visible white marks on the surface.[109]

The general direction of the road is northwest-southeast, with a slight turn to the south-east/east direction at the Ciglana site.[110]

(b) Glac – Mitrosrem Location. In the south-western sector of the Mitrosrem complex, between the Glac site and the Jarak road, physical traces of a surface were found in July 2017. The remains were found at a distance of 245 m south-west of the main gate of the Mitrosrem complex, and at the same distance north-east of the lip of the Sava river terrace and north-east of the remains of the Glac palace. The remains of the surface were found next to a small internally used petrol station, on its south-western side (WGS 84: 44°57'8.29"N 19°40'1.13"E). The area was uncovered under the supervision of Vujadin Vujadinović.

The area was archaeologically researched and the exposed surface found was 9.6 m long in a NE–SW direction and 3.2 m wide in a NW–SE direction. The surface structure was unearthed under a grassed layer of dark brown soil that was up to 0.1 m thick, and included vegetation roots, modern concrete debris and a number of smaller iron machinery parts.

The surface structure consists of crushed stone and brick of different sizes and shapes (up to 0.1 m in diameter), embedded in a layer of white lime mortar that was up to 0.12 m thick. The structure was laid on bare earth. The width of the unearthed section of the surface was, on average, 3 m, or approximately 10 Roman feet (*pedes*).[111]

The direction of the exposed section of the surface was southwest–northeast, and generally corresponds to the orientation of the Roman palace complex found further to the south-west. The surface is unlikely to be modern as the stone components lacked the sharp angular faces characteristic of modern mechanically crushed stones and gravel. Moreover, at Mitrosrem the modern development is a post-World War 2 Socialist era collective farm where there is a widespread and abundant use of concrete rather than mortar surfaces. The inclusions in the mortar binding material include many broken Roman bricks and no evidence of modern materials.

With the exception of the abundant usage of lime mortar, the pavement found at Glac – Mitrosrem partially resembles the structure of the Roman road section excavated at the site of Ciglana;[112] as well as the structure of the section of the *via militaris* discovered near the Kudoš channel, east of Šašinci, where equal

106 Jeremić 2016, 104.
107 Jeremić 2016, 102, sl. 67, 68.
108 Jeremić 2016, 102, 104, sl. 67, 68.
109 Jeremić 2016, 104, sl. 68.
110 Jeremić 2016, sl. 21, 67.
111 Hornblower, Spawforth 1999, 943.
112 Jeremić 2016, 102, 104, sl. 67, 68.
113 Брукнер 1995, 187, 188, пл. 3.

quantities of crushed stone and brick had been inserted into a matrix of hard clay.[113] Based on this, our preliminary hypothesis is that this surface is part of a Roman road, suggesting that this was a portion of the local road that skirted around the Glac palace complex on its northern side. Further examination and testing of this surface are merited to confirm this preliminary hypothesis.

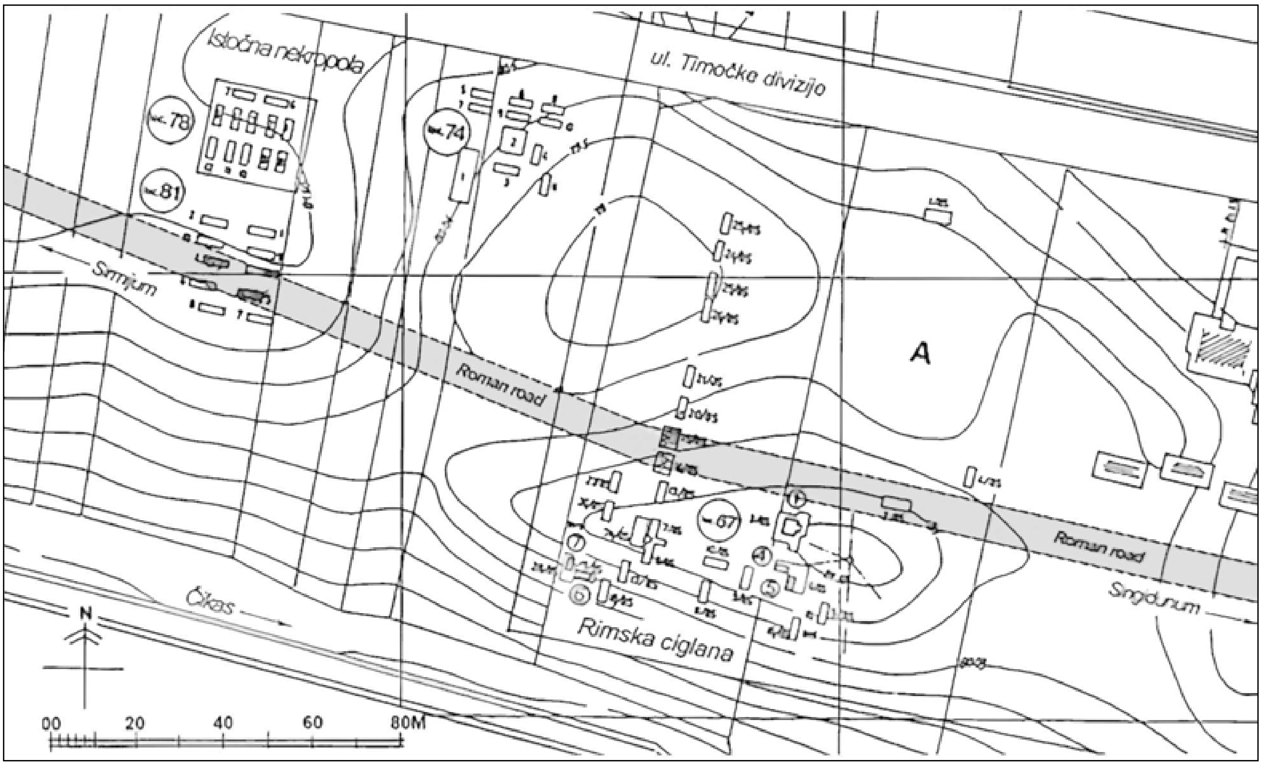




Fig. 12. Drawing of the position and direction of the Roman road at the Ciglana site (Locality 67), according to M. Jeremić (Jeremić 2016, 104, Fig. 67)
Fig. 13. Remains of the Roman road in a trench dug at the Ciglana site (Locality 67), according to M. Jeremić (Jeremić 2016, 104, Fig. 68)

Сл. 12. Цртеж позиције и правца римског пута на Циглани (Локалитет 67) према М. Јеремићу (Jeremić 2016, 104, Sl. 67)
Сл. 13. Остаци римског пута у сонди ископаној на Циглани (Локалитет 67) према М. Јеремићу (Jeremić 2016, 104, Sl. 68)



Fig. 14. Remains of the Surface (Roman road?) excavated near Glac in the MitroSrem complex in 2017, looking towards the north-east

Сл. 14. Осӣаци ӣовршине (римскоī ӣуӣа?) ископане ӣоред Глаца у круīу комӣлекса зīрада Миӣросрема 2017. īодине, ӣоīлед ка североисӣоку

Outline of the vicinal road between Sirmium and the Great Canal of Probus

Bearing in mind the indicators of the existence of the local Roman road elaborated above, the vicinal road between Sirmium's eastern periphery and the mouth of the Great Canal of Probus existed on the natural levee forming the lip of the left Sava river terrace, with a section of its route traversing through a part of the alluvial plain at the site of Aluga.

The road route may be outlined through the following sections:

(a) The Eastern Periphery of Sremska Mitrovica and Industrial Zone Section.

(b) The Leget Section.

(c) The Aluga Section.

(d) The Jarak Section.

Leaving aside for the moment the Eastern Periphery of Sremska Mitrovica and the Industrial Zone Section of the local road, which will be discussed further below in relation to the position of the adjacent *via militaris*, the position and directions of the vicinal road as follows.

In the Leget Section the road traversed along the lip of the Sava river terrace through the southern periphery of the Glac Creek West Field, across Glac Creek and the Glac site with a northern detour around the palace after it had been built at Glac. This is indicated by the physical remains of the road excavated north of the palace in the fenced area of the Mitrosrem complex. The road proceeded further in the direction of the south-east along the lip of the river terrace through sites of Glac East Field, Leget-Ribnjak and Vrbica (a former tell, today flattened). Further to the south-east the road traces crossed the Mančelov Gat canal and proceeded along the lip of the river terrace through to the Leget Northeast site.

In the Aluga Section the road diverted from the natural levee and traversed further to the south-east, across the Sava river alluvial plain on the human built *agger* that formed the present-day edge between the



Fig. 15. Remains of the Surface (Roman road?) excavated near Glac in the MitroSrem complex in 2017, looking towards the east
Сл. 15. Остаци површине (римског пута?) ископане поред Глаца у кругу комплекса зграда Митросрема 2017. године, поглед ка истоку

upper ploughed zone of the flood plain in the north and the lower wooded zone of the flood plain in the south, cutting through the Aluga tell site and leading towards Jarak.

In the Jarak Section the road was located along the river terrace lip, from the site of Turijan in the south-western periphery of the village to the Jarčina Channel, traversing next to the Karaula site, situated on a 4 m high tell in-between, on the bank of the river; the road traversed the Jarčina Channel between the sites of Kozlovac and Simate in the north and the Sava river in the south, following along the high ground of the river terrace further to the south.

Relationship between the local road and the *Via Militaris* on the eastern periphery of Sirmium

To understand the position and direction of the local road in the eastern periphery of Sremska Mitrovica and the Industrial Zone Section, one needs to consider its relationship to the imperial road in that area, the *via militaris* that started at the Eastern Gate of Sirmium, which has been located at the intersection of Kuzminska and Arsenija Čarnojevića streets, north-west of the Kalvarija tell site at the present-day service station (the so-called "Locality 9" or the "Porta Fossiensis").[114] This is the area of the Eastern Necropolis of Sirmium, with the public road likely cutting through eastward and along the modern street.[115] However, there is an alternative view that the *via militaris* proceeded in a south-easterly direction south of the necropolis, between Timočke Divizije Street in the north and the Čikas Canal in the south, to the sondage at the Ciglana site and several other spots in the direction of the Kalvarija tell.[116] According to this view, the imperial

[114] Dimitrijević, Whitehouse 2021.
[115] Милошевић 2001, 160.
[116] Jeremić 2016, 102–104, sl. 67, 68.



Fig. 16. Outline of the Roman road between Sirmium and the Canal of Probus:
1) Kalvarija; 2) „Locality 81"; 3) Ciglana; 4) Customs complex; 5) Glac Creek West Field; 6) Glac; 7) Glac East Field; 8) Leget–Ribnjak; 9) Vrbica; 10) Leget Northeast; 11) Aluga; 12) Turijan; 13) Karaula; 14) Kozlovac, 15) Simate; known route of the via vicinalis-red line, approximate route of the via vicinalis – white dashes

Сл. 16. Траса локалноī римскоī йуūа од Сирмијума до канала Проба:
1) Калварија; 2) „Локалиūеū 81"; 3) Циīлана; 4) Царина; 5) Глац–запад; 6) Глац; 7) Глац–исūок; 8) Леīеū–Рибњак; 9) Врбица; 10) Леīеū–североисūок; 11) Алуīа; 12) Туриjан; 13) Караула; 14) Козловац; 15) Симаūе, йознаūа руūа viae vicinalis – црвена линија, ūриближна руūа viae vicinalis – бела исūрекидана линија

road and the local road were one and the same until some later point of divergence.

The issue was not fully addressed in a recent paper by the authors of this paper, which focused on the section of the *via militaris* east of the Industrial Zone.[117] Therefore, the issue of the spatial relationship between the imperial road and the local road east of Sirmium requires further clarification.

The existence of the Roman road remains in the eastern periphery of Sirmium was first indicated by Count Luigi Ferdinando Marsili (1658–1730), an Italian scholar, naturalist and soldier who served in the army of the Habsburg Monarchy and spent twenty years in the middle Danubian region. In 1699, Marsili noted and sketched road remains in the eastern periphery of Sremska Mitrovica; according to Marsili, the road was made of stone, it was elevated above the wetland and, as the sketch shows, the road was located north of the Kalvarija hill, in a general direction of west-east.[118]

[117] Dimitrijević, Whitehouse 2021.

[118] Marsili 1726, 46, Tab 19 [Antiquitates Romanae, Figura VI].



Fig. 17. Marsili's sketch of the Roman road north of the Kalvarija site (Marsili 1726, 46, Tab 19 [Antiquitates Romanae, Figura VI])
Сл. 17. Марсиљијева скица римскоī йуūа северно од локалиūеūа Калварија (Marsili 1726, 46, Tab 19 [Antiquitates Romanae, Figura VI])

Two centuries after Marsili, in a letter (No. 147) sent to the Archaeological Museum in Zagreb in 1902, Ignjat Jung wrote that Roman road remains found in the eastern part of the town, in the area of Palanka, were like a "real *Via Appia*".[119]

Jung concluded that the position of the Roman road was not the same as the position of the modern one (Palanka Street), but south of it with both the modern and Roman roads leading eastward from the "Kamenita Ćuprija" (so-called "Jordan"; a stone bridge over the Čikas Canal in the west; WGS84: 44°58'17.09"N 19°37'14.57"E).[120] Such a position of the Roman road was indicated by smaller Roman buildings and sepulchral structures that existed where the modern road traverses, found stretching from the gardens on the northern side to the modern road southwards, at the parcels of Rukavina (WGS84: 44°58'16.61"N 19°37'30.51"E), Volkman (WGS84: 44°58'16.55"N 19°37'31.83"E), and Gecinger (at "Palanka no. 4"; WGS84: 44°58'15.98"N 19°37'37.11"E).[121] Jung identified the structures as either "posts of *custodes*" (guards) or "*cellae memoriae*", or even "*scholae*" (benches).[122] In addition to these structures, Jung also identified the existence of a smaller tomb and a structure of 12 pillars made of brick in the parcel of Bauer, south of the modern road (at "Palanka no. 86"; WGS84: 44°58'14.64"N 19°37'33.41"E); the pillars formed a plan of 43 m long and more than 6 m wide, placed in two rows with a distance of 7 m between each pillar.[123] Also worth noting is the fact that Jung, in 1902, recorded a find of a Roman tower in the parcel of Mandušić (at "Palanka no. 5"; WGS84: 44°58'16.55"N 19°37'33.98"E) on the northern side of the modern road next to the parcel of Gecinger.[124] The tower was excavated in 1884 and published in the same year by Š. Ljubić; it was round and measured 5.5 m in diameter with the outer wall being 1.2 m thick.[125]

According to Jung, the Roman road led from the bridge over the Čikas Canal towards the east and next to, as he described it, "the church of St. Demetrius" at the "Roman Cemetery", and further eastward in the fields.[126]

---

[119] Miladinović-Radmilović, Radmilović 2015, 139.
[120] Miladinović-Radmilović, Radmilović 2015, 139.
[121] Miladinović-Radmilović, Radmilović 2015, 89, 90, 125, 139.
[122] Miladinović-Radmilović, Radmilović 2015, 139.
[123] Miladinović-Radmilović, Radmilović 2015, 89, 90, 134, 139.
[124] Miladinović-Radmilović, Radmilović 2015, 139.
[125] Ljubić 1884, 64. It was initially reported that the tower was found in the "Gumno Bunjevca", but Jung later corrected this and located the find in the "Gumno Mandušića" at the Mandušić parcel.
[126] Miladinović-Radmilović, Radmilović 2015, 139.



Fig. 18. Positions and directions of the vicinal road and via militaris in the eastern periphery of Sirmium, known route of the via militaris-black line, approximate route of the via militaris-black dashes, known route of the via vicinalis-red line, approximate route of the via vicinalis-white dashes

Сл. 18. Позиције и правци вициналног пута и војног пута на источној периферији Сирмијума, позната рута војног пута – црна линија, приближна рута војног пута – црна испрекидана линија, позната рута вициналног пута – црвена линија, приближна рута вициналног пута – бела испрекидана линија

Referring to the "the church of St. Demetrius" at the "Roman Cemetery", Jung had in mind a triconchal martyrium and a chapel that were discovered by A. Hitrek in 1883. The structures were interpreted as being dedicated to St. Demetrius and St. Anastasia, firstly by P. Miller in 1893, then by J. Brunšmid in 1895, who also excavated at the site in 1894, and also by N. Vulić in 1929.[127] Jung accepted this interpretation, but this view was subsequently not accepted after the church of St. Demetrius was discovered in 1978 and 1981 in the centre of Sremska Mitrovica, at the *Forum* of the Roman city ("Locality 59").[128] So, Jung referred to this as the Gradina site situated just south and south-east of the eastern roundabout approach to Sremska Mitrovica (WGS 84: 44°58'12.00"N 19°38'11.58"E), that is, in the far eastern end of the Sirmium's Eastern Necropolis;[129] and referred to the *via militaris* that was located to the east of it.[130]

The information of both Marsili and Jung stand in agreement. The road was paved with stone, it stretched from the Eastern Gate of Sirmium crossing the Čikas Canal and passing next to the Kalvarija tell on its

[127] Brunšmid 1895, 161–163; Јеремић 2014, 54–58; Miladinović-Radmilović, Radmilović 2015, 165, 247, 278–290.

[128] Јеремић 2014, 60, 61, 65, сл. 16, сл. 17, сл. 18; Милошевић 2001, 176.

[129] Јеремић 2014, 58. Miladinović-Radmilović 2011, 191, 346, 347, Fig. 154; Милошевић 2001, 182.

[130] Dimitrijević, Whitehouse 2021.

northern side, stretching in a straight line from west towards the east next to the Gradina site and further into the fields.[131] This view that the *via militaris* runs through the Eastern Necropolis along Palanka Street on its southern side, is also shared by Milošević.[132] A confirmation of this location of the *via militaris* is implied by the existence of a watchtower next to the road on its northern side, excavated in 1884 in a parcel that belonged to the Mandušić family at the time.[133] Additionally, such a position perfectly coincides with the remains of the *via militaris* archeologically excavated at the gate of the dairy plant (Sremska Mlekara).[134] Thereafter, the imperial road traverses through fields in an easterly direction.[135]

However, this view of the location of the imperial road leaving Sirmium is not consistent with the findings of the remains of a road at the Ciglana site and several other locations in the direction of the Kalvarija tell, if such findings relate to the imperial road, as any road connecting these sites would have been located along the lip of the river terrace, south of the necropolis located east of the Porta Fossiensis and north of the Čikas Canal, passing on the southern side of the Kalvarija tell. This road would traverse from the Eastern Gate of Sirmium in a south-easterly direction with a slight direction change to the south-east/east at Ciglana.[136] If this road was in fact the imperial road, it would not lead to and join the remains found at the dairy plant, where the remains of the *via militaris* were excavated, without a sharp change in direction. The direction of this road continues further along the lip of the river terrace and meets the larger complex of Roman buildings excavated in 1904 in the present-day customs area, which Jung interpreted as an *excubitorium*-a night watchman post or a sentry, and as a *sacellum larum praestitum*-a shrine of deities, guardians of homes and crossroads.[137] The two buildings were connected with a large roofed porch, wide enough (7 m) for a road to go through, with which the travellers from and to the city were controlled and registered. The road then proceeded further to the south-east in the direction of the Glac site, where its remains were excavated in 2017. The road remains found at Ciglana and at Glac were built in the same way and were not stone paved. However, both Marsili and Jung indicated the *via militaris* was paved in the proximity of the Sirmium Eastern Gate in the present-day Palanka area.

These facts point to the conclusion that these were, in fact, two different roads, both starting at the Eastern Gate of Sirmium. The *via militaris* traversed eastward through the Eastern Necropolis (consistent with the pattern of Roman cemeteries flanking both sides of a major road leaving a city) and further into the fields, cutting the shortest route to the east, while the vicinal road proceeded to the south-east along the lip of the river terrace through the Ciglana site and the Roman buildings located in the present-day customs area. Thus, the imperial road and the local road are likely to have diverged at the Eastern Gate of Sirmium and not further eastward, and the road found at the Ciglana site is the vicinal road and not part of the *via militaris*.

Conclusion

The archaeological survey of the Glac region has confirmed the identity of the vicinal road from Sirmium to the Canal of Probus. This local road provides a link with the numerous settlement locations on the left bank of the Sava river. It also sheds some light on the nature of these settlements, given their proximity to the road.

A geomorphic feature, the natural levee of the Sava river, provided a natural *agger* for the construction of a local road, albeit with some deviations to link to settlements in the alluvial plain such as Aluga, and to bypass palace complexes such as Glac. This study has additionally clarified the interaction between the vicinal road and the imperial road in the peri urban fringe east of Sirmium, outside of the city's Eastern Gate.

In the course of this study, the nature of vicinal roads has been examined and a guide to the likely indicators for locating local Roman roads are outlined, which provides a basis for their systematic identification.

It highlights the neglected study of vicinal roads compared to imperial roads. Vicinal roads provided the backbone of communication and transport between small settlements, villages, villae and rural homesteads and, hence, were the lifeblood of the local economy and settlement patterns. Their lighter footprint on the

[131] Marsili 1726, 46, Tab 19 [Antiquitates Romanae, Figura VI]; Miladinović-Radmilović, Radmilović 2015, 139.

[132] Милошевић 2001, 160.

[133] Ljubić 1884, 64; Miladinović-Radmilović, Radmilović 2015, 139.

[134] Popović 1980, 102.

[135] Dimitrijević, Whitehouse 2021.

[136] Jeremić 2016, 102, 104, sl. 67, 68.

[137] Miladinović-Radmilović, Radmilović 2015, 82, 83, 155, 156; Милошевић 2001, 34, 35.

landscape provides a challenge to survey archaeologists attempting to prove their existence.

Acknowledgements

We would like to thank our colleagues Milica Tomić and Aleksandar Stamenković for their help in this research, Marco Roncolato for his translations of Italian, and also to the graduate and postgraduate students of archaeology who participated in the field surveys 2019–2021, Mihajlo Džamtovski, Stefan Gajić, Tanja Nikšić, Stefan Novaković, Ivana Protić, Jovan Stipić, Uroš Svirčević, and Zvezdana Štimac.

BIBLIOGRAPHY:

Bagshawe 2000 – R. W. Bagshawe, *Roman Roads*, Shire Archaeology, Princes Risborough, 2000.

Banchich 2018 – T. M. Banchich, *Epitome De Caesaribus, A Booklet about the Style of Life and the manners of the Imperatores, Sometimes Attributed to Sextus Aurelius Victor, translated by Thomas M. Banchich*. Buffalo, New York, 2018, Canisius College.

Boyd 1941 – H. A. Boyd (trans), *Columella. On Agriculture, Volume I: Books 1–4,* Loeb Classical Library 361, Cambridge, MA, 1941.

Brukner 1981 – O. Brukner *Rimska keramika u jugoslovenskom delu provincije Donje Panonije* (Summary: *Roman ceramic wares in the Yugoslav part of the Province of Lower Pannonia*), Beograd 1981.

Брукнер 1995 – О. Брукнер, Римски пут Sirmium (Сремска Митровица) – Singidunum (Београд), у: *Археолошка истраживања дуж аутопута кроз Срем*, З. Вапа, (ур.), Нови Сад 1995, 187–189. (O. Brukner, summary: Roman road Sirmium (Sremska Mitrovica) – Singidunum (Beograd), in: *Archaeological investigations along the highway route in Srem*, Z. Vapa (ed.), Novi Sad 1995, 187–189.).

Брукнер, Даутова-Рушевљан 2015 – О. Брукнер, В. Даутова-Рушевљан. 2015. *Римска пољопривредна имања. Виле рустике у југоисточном делу провинције Паноније.* Нови Сад 2015. (O. Brukner, V. Dautova-Ruševljan. 2015. *Roman Agrarian Estates. Roman Rustic Villas in the Southeastern Part of the Province of Pannonia.* Novi Sad, 2015.)

Brunšmid 1895 – J. Brunšmid, Arheološke bilješke iz Dalmacije i Panonije. *Vjesnik Arheološkog muzeja u Zagrebu, Vol. 1 No. 1,* 1895, 148–183.

Brunšmid 1905 – J. Brunšmid, Starine ranijega srednjega vijeka iz Hrvatske i Slavonije I. *Viestnik hrvatskoga arkeologičkoga družtva* n. s. 8, 1905, 208–220.

Ćalić et al. 2018–2020 – J. Ćalić, B. Butorac, M. Dimitrijević, T. Gaudenyi, A. Kiš, J. Kovačević Majkić, M.Milivojević, D. Miljanović, M. V. Milošević, B. Panjković, & D. Štrbac. 2018–2020. *Eco-geomorphological characteristics of the Glac archaeological site and its hinterland. A land system analysis of a segment of the Sava river catchment, Serbia.* Belgrade. Unpublished study, Geographical Institute "Jovan Cvijić" of the Serbian Academy of Sciences and Arts.

Campbell 2000 – B. Campbell, *The Writings of the Roman Land Surveyors. Introduction, Text, Translation and Commentary*, London, 2000.

Codrington 1918 – T. Codrington, *Roman Roads in Britain*, 3rd edition, London, 1919.

Chevallier 1976 – R. Chevallier, *Roman Roads*, London, 1976.

Црнобрња 2015 – А. Црнобрња, *Античка насеља, фортификације и комуникације у југоисточном делу Доње Паноније*. Необјављена докторска дисертација, Универзитет у Београду, 2015. (A. Crnobrnja, *Antique settlements, fortifications and communications in Southeast Lower Pannonia*. Unpublished PhD thesis, University of Belgrade, 2015.)

Crnobrnja 2020 – А. Црнобрња, *Југоисточни део Доње Паноније: топографија и просторна организација од I до IV века (Summary: The Southeastern part of Pannonia Inferior: Topography and Spatial Organisation from the 1st to the 4th Century)*, Београд (Belgrade) 2020.

Даутова Рушевљан 1983 – В. Даутова Рушевљан, *Римска камена пластика у југословенском делу провинције Доње Паноније*. Нови Сад 1983. (V. Dautova Ruševljan, *Rimska kamena plastika u jugoslovenskom delu provincije Donje Panonije.* Novi Sad 1983.)

Dautova-Ruševljan, Brukner 1992 – V. Dautova-Ruševljan, O. Brukner, *Gomolava – rimski period* (Summary: *Gomolava. The Roman Period*), Novi Sad, 1992.

Davies 2002 – H. Davies, *Roman Roads in Britain*, Stroud, 2002.

Dimitrijević 1961 – D. Dimitrijević, Nekoliko podataka o rimskom limesu u Istočnom Sremu, in M. Grbić (ed.), *Limes u Jugoslaviji I. Zbornik radova sa simpozijuma o limesu 1960. godine*, Beograd, 1961, 93–103.

Dimitrijević 1969 – D. Dimitrijević, Istraživanje rimskog Limesa u istočnom Sremu s posebnim osvrtom na pitanje komunikacija. *Osiječki zbornik* 12: 81–122.

Dimitrijević, Whitehouse 2021 – M. Dimitrijević, J. Whitehouse, From 'Porta Fossiensis' to Fossae. Exploring the Roman Road System in the Glac Study Area east of Sirmium, *Starinar* 71: 127–162.

Domingo 2018 – R. Domingo, *Roman Law. An Introduction*, Abington, 2018.

du Plessis 2020 – P. J. du Plessis, *Borkowski's Textbook on Roman Law*, 6th edition, Oxford, 2020.

Dušanić 1967 – S. Dušanić, Bassianae and its territory, *Archaeologia Iugoslavica* 8: 67–81.

Dušanić 1995 – M. Dušanić, The population of Fruška Gora based on epigraphic sources, in Nikola Tasić (ed.) *Fruška Gora in ancient times. Contributions to the ancient history and archaeology*: 33–56. Novi Sad 1995, Matica Srpska, Institute of Archaeology in Belgrade.

Географско одељење Главног Генералштаба 1894 – Географско одељење Главног Генералштаба, Ђенералштабна карта Краљевине Србије, *Митровица Б1*, 1:75000 (1:50000). Београд 1894.

Glac Project 2019a – Glac Project Excavation 2019, https://glac-project.sydney.edu.au/excavation-2019/ (accessed on 6 November 2021).

Glac Project 2019b – Glac Project Survey, https://glac-project.sydney.edu.au/glac-survey/ (accessed on 14 November 2021).

Graf 1941 – A. Graf, *Übersicht der antiken Geographie von Pannonien (Dissertationes Pannonicae ser. 1, fasc. 5)*. Budapest 1941 [1936].

Guillaumin 2005 – J. Y. Guillaumin (ed.), *Les Arpenteurs Romains. Tome I. Hygin Le Gromatique, Frontin*, Paris, 2005.

Guillaumin 2010 – J. Y. Guillaumin (ed.), *Les Arpenteurs Romains. Tome II. Hygin, Siculus Flaccus*, Paris, 2010.

Guillaumin 2017 – J. Y. Guillaumin (ed.), *Les Arpenteurs Romains. Tome III. Commentaire Anonyme sur Frontin*, Paris, 2017.

Hornblower, Spawforth 1999 – S. Hornblower, A. Spawforth, *The Oxford Classical Dictionary. The Ultimate Reference Work on the Classical World, Third Edition*. Oxford 1999.

Hudson 2007 – P. F. Hudson, Natural Levees, in *Encyclopedia of Water Science*, London, 2007 (DOI:10.1201/NOE0849396274.ch183), www.researchgate.net/publication/266450570_Natural_Levees (accessed on 6 November, 2021).

Itinerarium Antonini Avgvsti et Hierosolymitanvm: ex libris manvscriptis 1848 – G. Parthey & M. Pinder (eds) *Itinerarium Antonini Avgvsti et Hierosolymitanvm: ex libris manvscriptis*, 1848, Gustav Parthey, Moritz Pinder eds. F. Nicolai.

Јеремић 2014 – М. Јеремић, Култне грађевине хришћанског Сирмијума. у М. Радмиловић (ур.), *Sirmium – и на небу и на земљи (1700 година од страдања хришћанских мученика.* Благо Сирмијума, Сремска Митровица 2014, 43–78.

Jeremić 2016 – M. Jeremić, *Sirmium grad na vodi. Razvoj urbanizma i arhitekture od I do VI veka* (Summary: *Sirmium City on the Water. Urban and Architectural Development from 1st to the 6th century*), Beograd 2016.

Jovanović, Jovanović 1988 – B. Jovanović, M. Jovanović, *Gomolava – naselje mlađeg gvozdenog doba* (Summary: *Gomolava. Late La Tène Settlement*), Novi Sad, 1988.

Kantonai felmérés I. 1763–1787 – Kantonai felmérés I. 1763–1787, Slawonische Militärgrenze 1780, *B IX a 878*. Wien, Budapest, Österreichisches Staatsarchiv and Magyar Nemzeti Levéltár. https://maps.arcanum.com/en/map/first-survey-slavonia-mf/?layers=156&bbox=2155505.966230684%2C5605175.64585097%2C2213559.889213275%2C5626157.6101152515 (accessed on 21 Nov 2021).

Kantonai felmérés II. 1865–1869 – Kantonai felmérés II. 1865–1869, Croatia, *B IX a 758–4*. Wien, Budapest, Österreichisches Staatsarchiv and Magyar Nemzeti Levéltár. https://maps.arcanum.com/en/map/secondsurvey-croatia/?bbox=2181760.702318604%2C5611758.025672102%2C2196274.183064252%2C5617003.516738173&layers=9 (accessed on 21 Nov 2021).

Kantonai felmérés III. 1872–1884 – Kantonai felmérés III. 1872–1884, Magyarország felmérési térképének, *6063*, 1:25000. Wien, Budapest, Österreichisches Staatsarchiv and Magyar Nemzeti Levéltár.

Kiepert 1998 – H. Kiepert, *Formae Orbis Antiqui*. Oxford 1998 [1894].

Klemenc 1961 – J. Klemenc, Limes u Donjoj Panoniji, u: *Limes u Jugoslaviji*, M. Grbić (ur.), (Zbornik radova sa simpozijuma o limesu 1960. godine), Beograd 1961, 5–34.

Kolb 2019 – Anne Kolb, Via ducta. Roman Road Building. An Introduction to its Significance, the Sources and the State of Research, in Anne Kolb (ed), *Roman Roads. New Evidence. New Perspectives*, Berlin, 2019, 3–21.

Kovács 2009 – Péter Kovács, *Marcus Aurelius' Rain Miracle and the Marcomannic Wars*. Leiden and Boston, 2009.

Kukujević 1873 – I. Kukujević, Panonija Rimska. *RJAZU* 23, 1873, 86–157.

Laurence 1999 – R. Laurence, *The Roads of Roman Italy. Mobility and Cultural Change*, London, 1999.

Lay et al. 2021 – M. Lay, J. Metcalf and K. Sharp, *Paving Our Ways. A History of the World's Roads and Pavements*, London, 2021.

Lewis, Reinhold 1990a – N. Lewis, M. Reinhold (ed.), *Roman Civilization. Selected Readings. Volume I. The Republic and the Augustan Age*, 3rd ed., New York, 1990.

Lewis, Reinhold 1990b – N. Lewis, M. Reinhold (ed.), *Roman Civilization. Selected Readings. Volume II. The Empire*, 3rd ed., New York, 1990.

Ljubić 1883 – Š. Ljubić, Arkeologička izkapanja na Petrovačkoj gradini u Sriemu, gdje tonož starorimska Bassianis. *Viestnik Hrvatskoga Arkeologičkoga Družtva* 2, god. V, 1883, 33–49.

Ljubić 1884 – Šime Ljubić, Dopisi. Razne viesti, *Vjesnik Arheološkog muzeja u Zagrebu* VI (1), 1884, 56–64.

Лучић, Муждека 2012 – Б. Лучић, Р. Муждека, Извештај о обиласку атара Јарка за потребе израде студије о непокретним културним добрима на коридору гасовода „Јужни ток", документ бр. 6778, 3. април 2012, без паги-

нације. Registar *Jarak*, *no. E48/B*, 1964–2017, Arhiva Zavoda za zaštitu spomenika kulture Sremska Mitrovica: Sremska Mitrovica, Republika Srbija.

Madzharov 2017 – M. Madzharov, *Roman Roads on Bulgaria. Contribution to the Development of Roman Road Systems in the Provinces of Moesia and Thrace*, Hissar, 2017.

Magary 1967 – Ivan D. Magary, *Roman Roads in Britain*, London, 1967.

Marsili 1726 – L. F. *Marsili, Danubius Pannonoco–Mysicus, Obfervationibus Geographicis, Astronomicis, Hydrographicis, Historicis, Physicis Perlustratus Et in sex Tomos digestus, Tomus Secundus.* Hagae Commitum, Amsterdami 1726.

Mayer 1957 – A. Mayer, *Die Sprache der alten Illyrier, Band I, Schriffen der Balkankommision, linguistische Abteilung XV (15).* Wien 1957.

Miladinović-Radmilović 2011 – N. Miladinović-Radmilović, *Sirmium Necropolis.* Beograd 2011.

Miladinović-Radmilović, Radmilović 2015 – N. Miladinović-Radmilović, M. Radmilović. *Sirmium – Pisma Ignjata Junga.* Sremska Mitrovica 2015.

Milin 2004 – Bassianae, in M. Šašel Kos and P. Scherrer (eds), *The Autonomous Towns of Noricum and Pannonia. Situla* 42, 2004, 253–267.

Miller 1916 – C. Miller, *Itineraria Romana, Römische Reisewege an der Hand der Tabula Peutigeriana Dargestellt*. Stuttgart 1916.

Милошевић 1994 – П. Милошевић, *Топографија Сирмијума* (Summary: P. Milošević, *Topography of Sirmium*, Novi Sad 1994), Нови Сад 1994.

Милошевић 1988 – П. Милошевић, О траси пута Sirmium–Fossis и Sirmium–Bononia (Resume: Sur le trace de la route Sirmium–Fossis et Sirmium–Bononia). *Starinar* 39, 1988, 117–123.

Милошевић 2001 – П. Милошевић, *Археологија и историја Сирмиујума (Summary: Archaeology and Historiy of Sirmium).* Нови Сад: Матица српска.

Mirković 2017 – M. Mirković, *Sirmium Its History from the First Century AD to 582 AD*, Novi Sad 2017.

Mócsy 1974 – A. Mócsy, *Pannonia and Upper Moesia. A History of the Middle Danube Provinces of the Roman Empire*. London, Boston 1974.

Nagle 2004 – Betty Rose Nagle, *The Silvae of Statius*, Bloomington, 2004.

Omnes Viae 2011 – Omnes Viae, Roman Routeplanner, a reconstruction of an antique Roman map with internet technology 2011. Tabula Peutingeriana. https://omnesviae.org/viewer/ (accessed on 29 Sep 2020).

Palma 1982 – A. Palma, Le strade romane nelle dottrine giuridiche e gromatiche dell'età del principato, in *Aufstieg und Niedergang der Römischen Welt. Geschichte und Kultur Röms im Spiegel der Neuren Forschung (ANRW) II. Principat* 14, 1982, 850–880.

Patsch 1910 – C. Patsch, RE VII, in *Paulys Realencyclopädie der classischen Altertumswissen schaft*, A. Friedrich, P. Georg Wissowa, (eds), 1890–1980, 74.

Петровић 1995 – П. Петровић, Римски лимес на Дунаву у Доњој Панонији (Summary: Lower Pannonia Limes along the Danube, in Nikola Tasić (ed.) *Fruška Gora in ancient times. Contributions to the ancient history and archaeology*: 9–30. Novi Sad 1995, Matica Srpska, Institute of Archaeology in Belgrade.

Петровић 2015 – В. П. Петровић, *Римска насеља и комуникације од Јадрана до Дунава (I–IV век) (Summary: Roman Settlements and Communication Lines between the Adriatic and the Danube (First to Fourth Centuries)*, Niš–Beograd, 2015.

Petrović 2019 – V. P. Petrović, *Les voies et agglomérations romaines au cœur des Balkans. Le cas de la Serbie*, *Scripta Antiqua 120 – éditions de l'Institut Ausonius*, Bordeaux 2019.

Pharr 1952 – C. Pharr, *The Theodosian Code and Novels and the Sirmondian Constitutions*, Princeton, 1952.

Popović 1964 – D. Popović, Sremska Mitrovica – oktobar 1964, dokument br. 1037, oktobar 1964, str. 1–3. Registar *Sremska Mitrovica, br. E102/B*, 1960–2006, Arhiva Zavoda za zaštitu spomenika kulture Sremska Mitrovica: Sremska Mitrovica, Republika Srbija.

Popović 1967a – D. Popović, Kartoni arheoloških nalazišta, dokument br. 4420, 1967, bez paginacije (8 kartona). Registar *Šašinci*, *br. E120/B*, 1967–2007, Arhiva Zavoda za zaštitu spomenika kulture Sremska Mitrovica: Sremska Mitrovica, Republika Srbija.

Popović 1967b – D. Popović, Šašinci. Rekognosciranje 1967, dokument br. 1493, 1967, Registar *Šašinci, br. E120/B*, 1967–2007, Arhiva Zavoda za zaštitu spomenika kulture Sremska Mitrovica: Sremska Mitrovica, Republika Srbija.

Popović 1969–2017 – D. Popović, Kartoni arheoloških nalazišta, dokument br. 4231, nedatirano, bez paginacije, Registar *Jarak*, *no. E48/B*, 1964–2017, Arhiva Zavoda za zaštitu spomenika kulture Sremska Mitrovica: Sremska Mitrovica, Republika Srbija.

Popović 1969a – D. Popović, Jarak – rekognosciranje 1969. godine, dokument br. 2137, 6. decembar 1969, str. 1–6. Registar *Jarak*, *no. E48/B*, 1964–2017, Arhiva Zavoda za zaštitu spomenika kulture Sremska Mitrovica: Sremska Mitrovica, Republika Srbija.

Popović 1969b. – D. Popović, KO Jarak, dokument br. 1720, mart 1969, karta br. 284, razmera 1:50000**.** Registar *Jarak*, *br. E48/B*, 1969–2017, Arhiva Zavoda za zaštitu spomenika kulture Sremska Mitrovica: Sremska Mitrovica, Republika Srbija.

Popović 1969c. – D. Popović, Rekognosciranja u Sremu. *Arheološki pregled* 11, 1969, 249–259, T. 72.

Popović 1978a – D. Popović, Šašinci, dokument br. 2951. Registar *Šašinci, br. E120/B*, 1967–2007, Arhiva Zavoda za zaštitu spomenika kulture Sremska Mitrovica; Sremska Mitrovica, Republika Srbija.

Popović 1978b – D. Popović, Sremska Mitrovica, dokument br. 2952, 22 novembar 1978, stranice 1–4. Registar *Sremska Mitrovica, br. E102/B*, 1960–2006, Arhiva Zavoda za zaštitu spomenika kulture Sremska Mitrovica: Sremska Mitrovica, Republika Srbija.

Popović 1979 – D. Popović, Jarak, dokument br. 3024, 19. Novembar 1979, str. 1. Registar *Jarak*, *br. E48/B*, 1969–2017, Arhiva Zavoda za zaštitu spomenika kulture Sremska Mitrovica: Sremska Mitrovica, Republika Srbija.

Popović 1980 – D. Popović, Glavna Antička komunikacija u Sremu u svetlu arheoloških istraživanja (Zusammenfassung: Die Hauptkommunikation in Syrmien im lichte archäologischer untersuchungen). *Putevi i komunikacije u antici, Materijali 17*, I. Mikl-Curk (ur.), (Putevi i komunikacije u antici, Materijali 17, Peć 1978), Beograd 1980, 101–107.

Popović 1981 – D. Popović, Keramika starijeg gvozdenog doba u Sremu. *Pontes* 4, 1981, 14, T. 5/7.

Popović 1963 – V. Popović, Sirmium, Sremska Mitrovica – rimski grad. *Arheološki pregled* 5, 1963, 63–73.

Поповић 2003 – В. Поповић, *Sirmium – īрад царева и мученика (сабрани радови о археолоīији и исшорији Сирмијума)*, Сремска Митровица, 2003.

Radke 1981 – G. Radke, *Viae Publica Romana*, Bologna, 1981.

Ravennatis Anonymi Cosmographia et Gvidonis Geographica 1860 – *Ravennatis Anonymi Cosmographia et Gvidonis Geographica ex libris manus scriptis*, ediderunt M. Pinder et G. Parthey. Berolini in aedibus Friderici Nicolai 1860. http://www.imperium-romana.org/uploads/5/9/3/3/5933147/ravenna-cosmos.pdf (accessed 30 Oct 2020).

Rolfe 1935 – J. C. Rolfe, *Ammianus Marcellinus with an English translation by John C. Rolfe in three volumes I, translated by J. Rolfe*. London and Cambridge, Massachusetts, 1935.

Rolfe 1940 – J. C. Rolfe, *Ammianus Marcellinus Volume II with an English translation by John C. Rolfe, translated by J. Rolfe*. London and Cambridge, Massachusetts, 1940.

Salama 1951 – Pierre Salama, *Les Voies Romaines de l'Afrique du Nord*, Algiers, 1951.

Šaranović-Svetek 1986 – V. Šaranović-Svetek, *Antičko staklo u jugoslovenskom delu provincije Donje Panonije*, Novi Sad 1986.

Savezni Geološki Zavod 1982–1983 – Savezni Geološki Zavod 1982–1983, *Šabac, L34-112*, 1:100000, Beograd 1982–1983 [1974–1978], Savezni Geološki Zavod.

Scott 1932 – S. P. Scott, *The Civil Law. Volume I*, Cincinnati, 1932.

Talbert 2000 – R. J. A, Talbert (ed), *Barrington Atlas of the Greek and Roman World*, Princeton and Oxford, 2000.

Tasić, Petrović 1988 – N. Tasić, J. Petrović (eds), *Gomolava. Cronologie und Stratigaphie der Vorgeschichtlichen und Antiken Kulturen der Donauniederung und Sudosteuropas. Internationales Symposium, Ruma, 1986*, Novi Sad, 1988.

Union Académique Internationale 1968 – Union Académique Internationale, *Tabvla Imperii Romani. Aqvincvm–Sarmizegetvsa–Sirmivm auf dem Grunde der Weltkarte 1:1000000. L 34 Budapest*, Amsterdam, 1968.

Василић 1952 – Б. Василић, Топографска испитивања Сирмијума. *Зборник Машице сриске* 3, 1952, 165–168.

Viatores 1964 – The Viatores, *Roman Roads in the South East Midlands*, London, 1964.

Vojnogeografski institut 1979a – Vojnogeografski institut, *Šabac 1–2 (Sremska Mitrovica–istok), 428-1-2*, 1:25000, Beograd 1979 [1968], Vojnogeografski institut.

Vojnogeografski institut 1979b – Vojnogeografski institut, *Šabac 2–1 (Jarak), 428-2-1*, 1:25000, Beograd 1979 [1968], Vojnogeografski institut.

Вулић 1939 – Н. Вулић, Војводина у римско доба, у: *Војводина I*, Д. J. Поповић, (ур.), Нови Сад 1939, 61–80. (N. Vulić, Vojvodina u rimsko doba, u: *Vojvodina I,* D. J. Popović, (ur.), Novi Sad 1939, 61–80.).

Watson 1985 – A. Watson (ed.), *The Digest of Justinian*, 2 vols, Philadelphia, 1985.

Wright 1952 – W. C. Wright, *Philostratus and Eunapius; The lives of the Sophists, with an English translation by Wilmer Cave Wright*. Cambridge, Mass., 1952.

Резиме: МИЛИЈАН ДИМИТРИЈЕВИЋ, Универзитет у Сиднеју, Сиднеј
ЏОН ВАЈТХАУС, Независни истраживач, Сиднеј

ВИЦИНАЛНИ ПУТ ИЗМЕЂУ СИРМИЈУМА И ВЕЛИКОГ ПРОБОВОГ КАНАЛА. ИСПИТИВАЊЕ РИМСКИХ ПУТЕВА У ОКВИРУ ИСТРАЖИВАЧКОГ ПОДРУЧЈА ПРОЈЕКТА ГЛАЦ

Кључне речи. – Глац, канал Јарчина, римска Панонија, римски пут, Сирмијум, *via vicinalis*

У оквиру „Пројекта Глац”, који се реализује кроз сарадњу Археолошког института из Београда и Универзитета у Сиднеју, од 2017. године обављају се археолошка ископавања на Глацовом салашу 4 km југоисточно од Сремске Митровице и археолошка рекогносцирања ширег подручја око локалитета. Истраживачко подручје обухвата делове територија Срема и Мачве укупне површине 7 km². Уз археолошка рекогносцирања, 2018. и 2020. године обављено је фотографско и фотограметријско снимање из ваздуха као и снимање *Lidar* уређајем подручја између Сремске Митровице на западу, Шашинаца и Јарка на истоку и југоистоку.

Циљеви археолошких рекогносцирања су: 1) препознавање образаца насељавања током античке прошлости на ширем подручју око локалитета Глацов салаш; 2) интерпретација услова животне средине овог подручја у далекој прошлости; 3) утврђивање социоекономских активности у прошлости са фокусом на руралну економију; 4) идентификација античких структура у непосредној околини Глацовог салаша: насеобине, некрополе, путне комуникације и сл.

Као један од истраживачких циљева дефинисано је и прецизно мапирање античких путних комуникација на подручју истраживања, укључујући мапирање вициналног или локалног пута уз леву обалу реке Саве, између Сирмијума на северозападу и ушћа канала Јарчине у Саву на југоистоку, прокопаног у оквиру хидромелиорационих радова у време цара Проба (276–282. г.).

У раду су приказани нови резултати теренских истраживања, примене метода даљинске детекције и геоморфолошке анализе подручја уз леву обалу реке Саве.

Указано је на могућности идентификовања локалних путних комуникација кроз литературу и археолошку топографију као и на ограничења њиховог препознавања на терену, с обзиром на чињеницу да те комуникације нису биле део античких итинерера, а због начина градње такве структуре су оставиле мање уочљиве физичке трагове него друге јавне комуникације као што су римски војни путеви.

Приказана је шира историјска слика настанка, коришћења, управљања и статуса вициналних путева у контексту римског права; као и социоекономска функција локалних путних комуникација у античком периоду у односу на друге типове комуникација попут војних и приватних путева.

Археолошка рекогносцирања спроведена 2017. године и током периода од 2019. до 2021. године потврдила су постојање физичких трагова локалног или вициналног пута дуж леве обале реке Саве, између југоисточне периферије Сирмијума и ушћа канала Јарчине. Овом комуникацијом била су повезана античка рурална насеља и пољопривредна добра дуж реке, од којих је већина настала током касне праисторије, настављајући такође живот кроз период римске доминације. Посматрано од северозапада ка југоистоку, вицинални пут уз реку Саву повезивао је насеља на локалитетима и потесима: Паланка, Царина и лука Легет, Глац–запад, Глац (Глацов салаш), Глац–исток, Легет–Рибњак, Врбица, Легет–североисток, Алуга, Туријан, Караула, Козловац и Симате уз канал Јарчину североисточно од његовог ушћа у Саву. Међу овим насељима истиче се античко пољопривредно добро на локалитету Глац, где је почетком 4. века изграђена царска палата. Сва насеља смештена су на ивици речне терасе са изузетком насеља типа тел на локалитету Алуга северозападно од Јарка, које се налази дубоко у алувијалној равни реке, односно у плавној зони.

Руб речне терасе као природна геоморфолошка форма послужио је као основа за труп локалног античког пута (*agger*), што је потврђено површинским налазима античког материјала дуж трасе. У зони тела Алуга труп пута је конструисан кроз плавну зову у виду насипа, који је детектован *Lidar* уређајем и дуж кога је забележен покретни антички материјал, опека, малтер, керамика.

Остаци структуре од кречног малтера, камена и античке опеке пронађени су у непосредној близини локалитета Глацов салаш, али њена ближа идентификација захтева додатна истраживања. Таква структура откривена је 1985. године на локалитету Циглана на југоисточној периферији Сремске Митровице, интерпретирана као остатак античког пута. На основу нових истраживања ова структура је препозната као део вициналног пута који је пратио ивицу речне терасе. Док је однос локалног пута и војног пута на источној периферији Сирмијума јасније дефинисан. Раздвајање ове две трасе са већом сигурношћу се може лоцирати на простор око источне капије Сирмијума.

Вицинални путеви су најчешће запостављени у археолошким истраживањима у корист војних путева; а заправо су представљали кључне правце копненог транспорта на локалном нивоу, повезујући сеоска насеља и пољопривредна добра, утичући на руралну економију и обрасце насељавања у античкој прошлости.

UDC: 904:730.033.2"653"(497.11)
https://doi.org/10.2298/STA2272253R
Original research article

MIŠA RAKOCIJA, Institute for Cultural Heritage Preservation Niš

A MARBLE STATUE FROM NIŠ OF AN EARLY BYZANTINE IMPERIAL WOMAN

e-mail: mirakocija@gmail.com

Abstract. – The paper presents and analyses the only known Early Byzantine marble life-size statue of a secular woman in the Byzantine empire, which was discovered in the Niš Fortress in 1931. She is dressed in an unpretentious but dignified stola with a wide belt under her breasts, necklace around her neck and cloak on her back, status symbols by which prominent persons were recognisable throughout the Middle Ages. Being aware of the fact that it is not possible to be certain of her identity, we have enough reasons to suggest that this is a statue of an unknown imperial woman (the empress or a woman from the imperial environment) who, like emperors, was presented with the cloak. As such, it was a common part of the city forum of Naisos, as well as a worthy successor to the composition of Tetrarchs and the statue of Constantine the Great. Stylistic analysis indicates the still living ancient heritage united with Christian concepts of the dress design and its resemblance to the dresses of women from the Empress Theodora's entourage date it back to the 6th century and Justinian's epoch.

Key words. – imperial woman, empress, statue, stola, Niš, forum

Here, we remind you of the marble statue of a woman that, despite being exhibited in the Niš Fortress lapidarium and accessible to everyone,[1] has not been a subject of interest for the professional and scientific public. Significantly different from the city's famous ancient sculptures, both in the method of execution and conception, and in unprecedented clothing on marble statues, are the reasons for much doubt among those researchers who left it aside without engaging themselves in its stylistic analysis, time of creation, who it represents or where it was placed. For ninety years, a significant work of art and specific sculptural achievement has remained invisible and forgotten, almost as if it did not exist.

It is a life-size statue of a female figure made of polished white marble (1.52 m tall, 0.43 m wide and 0.20 m thick), which was excavated by Niš Museum collaborators in the fortress in 1931.[2] It is not known exactly where in the fortress, but this information is sufficient to conclude that it was located within the city walls (*intra muros*) of the Roman city as the free sculpture. The figure is artisanally and expertly presented in its almost life size, in a calm, standing position, on a low pedestal. Its secondary use as spolia is revealed by regularly arranged round holes on the body and pedestal (diameter of about 8–12 cm), the lack of the head as well as the completely damaged right arm and visible left upper arm that lacks the forearm with the hand. The preserved left upper arm indicates that the arm was next to the body and bent at the elbow at waist height.

[1] Rakocija 2001, 97/8.

[2] Вулић 1931, 103/104. He offers a photograph of the statue and a short description, not defining the gender but saying: "There is presented a human figure standing still" Vulić's description was transcribed in the inventory book of the National Museum in Niš (inv. no. 24/E), and it was incorrectly recorded that it was discovered in 1933 instead of 1931. I would like to thank the archaeologist Vesna Crnoglavac from the National Museum in Niš for the documentation provided.

Manuscript received 9th February 2022, accepted 27th October 2022



Fig. 1. Statue of the Imperial Woman, anterior (photo by Z. Radosavljević – Kiki)

Сл. 1. Сшашуа царске жене, предња сшрана (фошо: З. Радосављевић Кики)



Fig. 2. a) Pulcheria (solidus); b) Ariadne (solidus)

Сл. 2. а) Пулхерија (солид); b) Аријадна (солид)



Fig. 3. Belt with the fringes, detail

Сл. 3. Појас са ресама, дешаљ

On both sides below the elbows of the broken arms, visible vertical flutings indicate that both arms were in a similar position, bent at the elbow and directed towards the observer, leaving the thoracic section of the body visible. The sculptured female figure, from her posture to her clothes, is presented modestly and with dignity, which may only reflect the taste of the time in which it was created. (Fig. 1)

The clothes are accurately understood and realistically presented. She is wearing a flat long dress (stola) with a wide collar – maniakis (μανιήκηφ) – bordered by two semi-circular ribbons, like some kind of necklace. Over the shoulders, the statue is covered with a cloak hanging down its back in a such a way that it resembles a royal mantle – cloak *(poludamentum)*, fastened on the shoulders with, it seems, a circular fibula. The cloak is accurately and expertly presented on the back of the statue. Yet, as the edge line below the statue's knees with draperies on both sides suggest, over the stola and under the mantle, another garment is represented.

On the Niš statue of an imperial woman, there are visible traces of a round fibula on the right shoulder, similar to those that are found on the coins of imperial women from the 5th and 6th centuries. For example, let us mention the coins (solid) of two women who, at one point in the reign of Augusta, had power in their hands: the empress and saint Pulcheria (414–453), sister of Theodosius II (408–450), and the Christ-loving Empress Ariadne (474–515), wife of Zeno.[3] On the these coins of imperial women (sisters, mothers, wives), on the obverse, there is a bust of the empress in profile, in court clothes, with a diadem on her head, with a similar collar and an equally pleated dress on the

[3] Sear 1974, 352–365; Brubaker 1997, 52–75.



Figs. 4, 5, 6. Statue of the Imperial Woman: right and left lateral side and posterior of the statue (photo by Z. Radosavljević – Kiki)

Сл. 4, 5, 6. Сшашуа царске жене: десна и лева бочна сшрана, и задња сшрана сшашуе (фошо: З. Радосављевић Кики)

chest, and there is also a round fibula on the shoulder, the same that is speculated to be on the Niš statue, which once again places it within the company of imperial women. (Fig. 2) The fibula was an important and rich detail, usually of round shape with a ruby in its centre, surrounded by pearls, from which hang three gold chains with pearls suspended, supporting a mantle on the right shoulder. It is speculated that it is such a type of fibula from the form of a polished round protrusion on the right shoulder of the Niš sculpture.

Over the left arm, above the elbow, a semi-circular border of folded fabric is visible that hangs below the elbow just long enough to underline a belt that disappears under the mantle on the back. Perhaps this is the other end of the mantle that was draped over the left arm of the statue. Such an interpretation is influenced by the shorter left edge of the mantle on the back, which folds in the direction of the statue's left elbow. On the other hand, in accordance with the fashion already accepted in the 5th century, it should not be overlooked that it may be a short cloak – a chlamys (χλαμύς), which was draped over the left shoulder and arm, the ends of which appear in the form of a semicircle under both elbows.

At that time, the chlamys was accepted by women for certain ceremonies, but in accordance with the principles of the new religion, it was now more massive and made of expensive fabric, usually heavy silk, in gold and purple colours, when it concerns the imperial woman.[4]

On the other hand, several examples of the early Byzantine empresses testify that imperial clothes was consisted of golden embroidered palla over stola –

4 Rizzardi 2011, 140–141; Fauro 1995, 489–490.

possibly depicted below the mantle, which in most of cases was the clothes associated with the fashion of the high social status women.[5]

The elegant slightly bell-shaped stola is tightened under the breasts with a simple wide belt made of fabric, under which both of its ends are tucked from the front and fall down in a straight line to below the knee and end in long fringes. (Fig. 3) The fringes are twisted and oblique notches are the only evidence of the sculptor's aspiration for meticulous processing of details that have been lost over time. There, at the height of the fringes, a wide band is marked on the dress in the form of a lower border (circulation) as part of the inspired dress design. The tip of the shoe protrudes from the dress.

The stola is folded above the waist in a way that it discreetly but accurately depicts the breasts. Below the belt, between its hanging ends, shallow semi-circular notches imply the belly, while two slightly curved elongated notches descend as if to indicate the position of the legs. Deep parallel flutings along the sides at the hip height and below the elbows descend to the ground, thus evoking folds in the fabric. The lateral flutings move to the front, to the falling ends of the belt. Such vertical rectilinear folds on the sub-belt part of the stola resemble some remaining flutings on a long-forgotten pillar, offering here the impression of the heavy fabric from which the stola was tailored, falling down to the ground with all its weight and forming deep rectilinear folds. Seemingly rough vertical folds in the form of identical flutings here are, together with the lower border, integrated into the decorative scheme of the dress, evoking its elegant and refined look.[6] (Fig. 4, 5)

The back of the statue is sculpturally skilfully performed with beautifully polished and accurately performed stylized shapes that suggest the overlapping of the fabric. The vertical edges of the mantle, which falls down the back in wavy folds, are accurately presented. All the above was performed in such a way that the back was expertly separated from the lower part of the body. Both the front and back of the sculpture were equally carefully processed, which indicates that it stood in the open in a way that it could be seen from all sides. In addition, it has all characteristics of a public monument, solemn and triumphant in character, which is a feature of imperial art. (Fig. 6)

The sculpture is schematically processed from straight, slightly rough lines. A slightly bell-shaped long dress with schematic folds covers the body from the neck to the shoes. The stola has a common semi-circular opening around the neck that is accompanied by a necklace, but without intrusive exposure or outlining of the body curves. Nevertheless, the Niš sculpture has preserved the female body outlines thanks to the free folds above the belt, designed to indicate the beauty of the breast curvature, as a still living memory of the Roman art. The figure is discreetly waisted thanks to the wide and highly placed belt in a way that emphasises the elongation and elegance of a figure typical of the female body. All the above, together with the inspired design of the stola, assures us that it is a representation of a woman. This method of presenting a

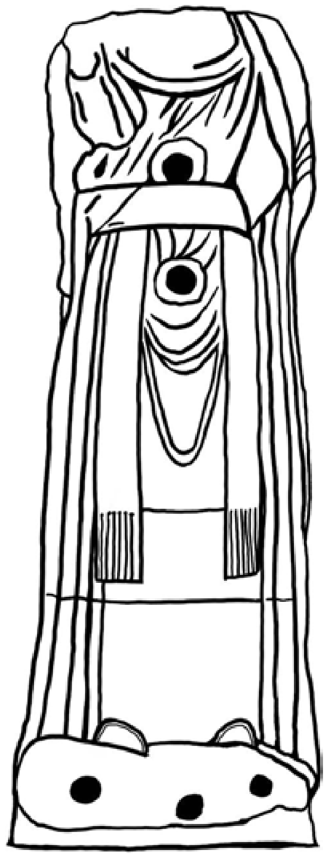


Fig. 7. Statue of the imperial woman (drawing by architect M. Dimanić)

Сл. 7. Сшашуа царске жене (цршеж: арх. М. Диманић)

[5] Parani 2007, 510–511.

[6] Procopius attributes to Justinian's time the mastery of secret silk production as a result of "industrial espionage", while only imperial workshops could use pigment obtained from a special species of sea snails (murex brandaris) – Поповић 2021, 34.



Fig. 8. Comparative view,
the way of processing vertical folds:
a) on the dress of the Empress,
National Museum Niš;
b) military tunic,
Archaeological Museum in Istanbul

Сл. 8. Упоредно сагледавање начина
обраде вертикалних набора:
а) на хаљини царице,
Народни музеј Ниш;
б) војничкој тун覆ци,
Археолошки музеј у Истанбулу



Fig. 9. Comparative view:
a) vertical drapery from the statue of
Emperor Justinian I (Justiniana Prima)
with twisted fringes;
b) twisted fringes on the belt
of the Empress of Niš

Сл. 9. Упоредно сагледавање:
а) вертикално драперије са статуе
цара Јустинијана I (Јустинијана
Прима) са тордираним ресама;
б) тордиране ресе на појасу
царице из Ниша

completely covered female figure in contemporary clothes is in line with the times and Christian canons. This sculpture still reflects a synthesis of Antiquity and Christianity. (Fig. 7)

Schematisation, insistence on symmetry and stylisation are recognisable of the time when Christianity entered into all pores of citizens' lives. The clothes treatment, simple design and modest decorativeness are typical of Christians: memory of the Roman art visible in fold formation above the belt, known historical circumstances, and the great resemblance to the dresses of women from Empress Theodora's entourage from the church of San Vitale in Ravenna helps us to date the Niš sculpture more closely to the 6th century. The geometrically schematised design is recognisable as Byzantine fashion,[7] which we find on rare related contemporary sculptures that do not represent holy figures. In the Archaeological Museum in Istanbul, on a military tunic and marble representations of torso armour, one can see an artisanal similarity in the sculptural treatment of rough vertical rectilinear folds that look more like flutings on a pillar than folds of cloth. As such, at a significantly more modest artistic level compared to the Niš sculpture, it is properly dated to the 6th–7th century.[8] (Fig. 8) A certain similarity in the method of shaping rectilinear folds can be found on bronze fragments of drapery from the statue of Emperor Justinian I (527–565), which stood in the circular forum centre in the Upper Town of Caričin Grad (Ivstiniana Prima) and is dated to the 6th–7th century.[9] On this fragment, as well as on the Niš statue, vertical folds are reduced and schematised, there is also a border on two levels with fringes that are twisted in the same way with oblique notches. (Fig. 9) Regardless of the different material, bronze or marble, a similarity is recognised in the still rough artistic and artisanal processing. What they have in common are rough folds in the form of vertical flutings, which can be related to the method of time in which these statues were created.

Contrary to the Roman way of presenting clothes, in the eastern capital of Rome, in accordance with the new religious teachings, there was a fashion in which the flutter of drapery on clothes made of light material was abandoned. The new fashion showed tendency towards a rigid rhythm of folds on the clothes with measured vertical decorative lines.[10] From clothes that follow and emphasise the body curves, there was a switch to clothes with a tendency to hide the body under heavy fabric and decorations. Over time, the Byzantine clothing would be increasingly characterised by the austerity of their function, but luxury and decorativeness of their appearance. The appearance of such a fashion can be seen on the Niš sculpture, where a rigid and heavy fabric is realistically presented in an exact cut, with rough and precise vertical folds, which also looked the same in real life. The swaying of folds above the waist at breast height indicates that the Roman heritage had not yet been forgotten. In accordance with the new religion, the sensuality of the body disappeared in the clothes' width; the figure is static and elongated in accordance with the new canons, offering a noble and dignified impression. It was created in the 6th century during the full swing of the last renewal, when the art of Justinian's epoch turned again to Hellenistic-Roman realism. This is how the hitherto difficult-to-grasp art form of the Niš sculpture can be defined, which documents early Byzantine clothing and perhaps the skill of a local sculptor. This statue is another reliable testimony to how elegantly women dressed in the 6th century.

A life-size marble statue of a secular woman from the Byzantine Empire has not been discovered so far, which makes it difficult to define the Niš statue more closely. We found a certain resemblance to a long dress with a collar that is accompanied by a necklace on an amethyst stone figurine (91mm), inspiringly recognised as the Byzantine Empress, in the York Museum, roughly dated to the 4th century.[11] (Fig. 10)

One can recognise the Niš statue's general resemblance, regarding the body proportions, clothes, and perhaps position of the hands, to the St. Eudocia representation executed in the inlaid icon technique on a marble slab from Constantinople.[12] (Fig. 11)

---

[7] Houston 1947; Васић 1992.

[8] Firatli, 1990, 9/10, fig. 11a, 11b (inv. 5673)

[9] Мано-Зиси 1974, 81; Кондић, Поповић 1997, 187; Špeher 2014, 43–49; Иванишевић, Бугарски 2019, 9–19.

[10] It should be mentioned that until the 6th century, church clothes did not differ much from secular clothes – Cittadini 1938, 52–54.

[11] Chatzidakis 1994, 36, fig. 7; Hartley, Hawkes, Hening, Mee, 2006, 141, fig. 80.

[12] Grabar 1963, 110, Pl. LXI. 2. Coloured stone inlay on a marble slab from the church of the Lips monastery (Fenari Isa Mosque), from the 10th century in the Archaeological Museum in Istanbul. It is believed that it represents the empress whose christened name is Eudocia (Atinaida), the wife of Emperor Theodosius II, who died in 460. There is some debate about which Eudocia it was and whether it is from the 10th century, see: Gerste 1997, 699–707.





Fig. 10. Byzantine Empress from the Museum of York, amethyst (91 mm), 4th century
Fig. 11. St. Eudocia, inlaid icon on a marble slab (Istanbul)

Сл. 10. Визан̄ш̄ијска царица из Музеја у Јорку, амеш̄исш̄ (91 mm), 4. век
Сл. 11. Св. Евдокија, инш̄арзирана икона на мермерној ӣлочи (Исш̄анбул)



Fig. 12. Comparative view: Theodora with her retinue (Ravenna) and the statue of the Empress from Niš

Сл. 12. Уӣоредно саīледавање: Теодора са свиш̄ом (Равена) и сш̄аш̄уа царице из Ниша

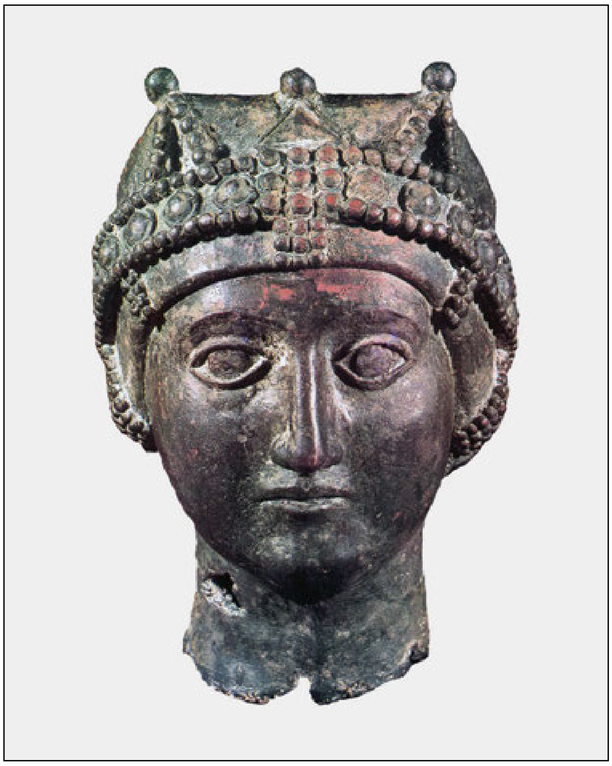


Fig. 13. Portrait of the Byzantine Empress Euphemia (Justinian's mother), 6th century, Balajnac near Niš (in: Mano-Zisi 1982, fig. 106)

Сл. 13. Портрет византијске царице Еуфемије (мајка Јустинијанова), 6. век, Балајнац код Ниша (у: Mano-Zisi 1982, сл. 106)

In the mosaic technique, we see a great resemblance to the dresses of women from the Empress Theodora's entourage in the church of San Vitale in Ravenna. They are all dressed in long, slightly bell-shaped stolas with harmonious cut and beautiful design, from under which their shoes protrude. Their dresses were designed on the same principle as the one on the Niš statue. Two women from the Empress Theodora's entourage, as with the Niš statue, have semi-circular collars accompanied by necklaces. A resemblance is also visible in the belt around the waist, on the hanging end of which there are fringes, one on also the lower border, on the dresses of two women from the Empress Theodora's court entourage. (546/7).[13] (Fig. 12)

Before our eyes, there is a sculpture that we are sure does not represent a deity but a secular woman in contemporary clothes of an elegant design. She is dressed in an unpretentious but dignified stola with a wide belt under her breasts, necklace around her neck, rich fibula on the right shoulder and cloak on her back, as status symbols throughout the Middle Ages,[14] indicating that she is a prominent person. The fact that it was designed as the free statue and discovered inside the city not far from the square where, visible even today, the older Roman and younger Byzantine streets from the 5th–6th century intersect, which is also the time when the statue was created, [15] points to its public character. As such, she must have represented a person of very high rank in the imperial hierarchy of the 6th century and the Justinian era. Being aware of the fact that it is impossible to be sure of her identity, there are enough reasons for us to suggest that this is the statue is of an unknown imperial woman with a lavish fibula such as we see on contemporary coins of many empresses who, like the emperors, were presented with a cloak.[16] As such, it was a common part of the city forum. The closest example we found is not far from Niš, in the early Byzantine fortification (Kulina site) near Balajnac, where a bronze portrait of the forum statue of the Byzantine Empress Euphemia, mother of

[13] We see the ribbon along the lower edge of Empress Theodora and a woman from her entourage in the church of San Vitale in Ravenna – Chatzidakis 1994, 36, fig. 7.

[14] About the cloak and the belt in Byzantium with literature: Цветковић 2012, 551–561.

[15] Петровић 1976, 54.

[16] The day after Zeno's death, Ariadne dramatically appeared before the people of Constantinople in the imperial box in the Hippodrome. She was well-received with friendly acclamations. Significantly, she wore the imperial cloak, a subtle reminder of her status as an Augusta and her inherent power to crown a new Augustus – Bleeker 2022, 193.

Emperor Justinian I, was found.[17] Like the Niš statue, the portrait of Empress Euphemia was discovered in the centre of the fortification where the main streets intersect, that is, on the forum where the life-size ceremonial statue of the Byzantine imperial woman stood. (Fig. 13)

We can see that the imperial women of Justinian's house were respected, accessible to the public and well visible in various artistic techniques – beginning with the mosaic in the church of San Vitale in Ravenna, where Justinian's wife the Empress Theodora and her retinue are represented, via the bronze head of the life-size statue of Emperor Justinian's mother the Empress Euphemia that was discovered at Gradište near Balajnec (Serbia), to the marble statue of an unknown imperial woman from the Niš fortress. If we add that the statue of Empress Theodora stood on an imperial porphyry pillar in Constantinople, as recorded by Procopius of Caesarea,[18] it becomes clear how much the imperial women were respected in the time of Justinian I (527–565),[19] which is also noticeable on the statue of the Empress from Niš.

We will never find out how the head of the statue was designed, but we can observe the frozen immobility of the body and well thought out draping that covers the body contours, beautifully tailored stola, but also the anciently accurate proportions. Stylistic analysis indicates the still living ancient heritage united with Christian concepts of the dress design and its resemblance to the dresses of women from the Empress Theodora's entourage, which dates it to the 6th century and the Justinian's epoch.

Considering the elegant posture of the figure, the dignified clothes of inspired design, its symbolism and realism, the place of its finding and the perceived dating to the 6th century, we are of the opinion that the Niš statue represents an unknown imperial woman that stood in an honorary place, maybe the city forum, of the early Byzantine Naisos (*Ναϊσσος*), the same as the statue of the Byzantine Empress Euphemia, the mother of Emperor Justinian, which stood in the square in the small fortification at the Kulina site, or the statue of the Emperor Justinian in the circular forum of Justiniana Prima. It was noted that at that time (5th–6th century), profane statues were reserved only for the ruler and his closest family as well as for high state dignitaries.[20] Sculptors would make sculptures in free space until the 8th century, most often statues of emperors and empresses, after which the statue almost did not exist until the 15th century.[21]

In the early Byzantine period in Niš, as the centre of this region, it is to be expected that work of the established late antique sculpture workshop would continue, which satisfied the needs of the city and its wider environment with its products.[22] The method of workmanship indicates the provincial character and work of an artist in the city workshop of Naisos who made a statue of correct proportions of sometimes less and sometimes more rough, always stylised and reduced shapes whose exact layout reveals an experienced local sculptor and a connoisseur of the sculpture craft. At that time, the sculpture used by the emperors was not made only in Constantinople.[23] Our proposal is that production of the Paleo-Byzantine Niš stonemason's workshop can be joined by the sculpture of the "Byzantine Empress", despite the fact that we do not have possibility of comparison with similar monuments from the city.

When we say the "Byzantine Empress", we do not refer only to the emperor's wife and woman who inherited the throne, for example as regent, but also to the imperial women who were directly related to the emperor and were presented as empresses to the people. The idealised marble statues, as they were made in Antiquity, were slowly ceasing to be made, and became rarer after the 5th century.[24] With the legalisation of Christianity in 313, in accordance with the new religion, the attitude towards the statues slowly changed. In the Paleo-Byzantine period, the Roman emperors supported this form of Roman art, which was slowly dying out, because the church saw in sculpture something that exalted idolatry. In Constantinople and larger cities, the use of monumental sculpture extended for two centuries, covering the Paleo-Byzantine period. This is explained by the fact that statues were in service of the Byzantine state and represented a significant

[17] Срејовић 1959, 77–87.

[18] The beautiful statue of Empress Theodora on an impressive porphyry pillar was surrounded by bronze and marble statues made by Phidias, Lysippus or Praxiteles – Procopius 1888, 37.

[19] Especially towards his wife Theodora "because they did not do anything apart from each other during their life" – *Prokopije iz Cezarije, Tajna istorija*, predgovor R. Radić, Beograd 2004, 65. More about the imperial women: Garland 1999.

[20] Grabar 1963, 16.

[21] Mango 1963, 71–72.

[22] Николајевић 1957, 59; Ракоција 2006, 95–112.

[23] Grabar 1963, 25.

[24] Grabar 1963, 31.



Fig. 14. Imperial statues: a) head of the tetrarch, beginning of the 4th century; b) Emperor Constantine the Great, third decade of the 4th century; c) statue of the early Byzantine empress, 6th century

Сл. 14. Царске статуе: а) глава тетрарха, почетак 4. века; b) император Константин Велики, трећа деценија 4. века; c) статуа рановизантијске царице, 6. век

political factor underlining the reputation of the city where it was located, and glorifying rulers and dignitaries of the Empire.[25] Regardless of all this, the Byzantines would always have admiration for ancient statues as a projection of the continuity with Greek culture and the Roman Empire and memories of the glorious past. The first Byzantine emperor, Constantine the Great (324–337), moved many statues from Rome to Constantinople in order to decorate his new capital.[26] The perfection of statues was perceived as a reflection of the inner spiritual beauty we see in the works of Gregory of Nazianzus (329–390) and, much later, in the works of Michael Psellos (1018–1078).[27]

In the provinces, following the example of the capital, and after the spiritual changes, the statues still remained part of the urban landscape of the city centre and the forum area where, in the Roman times, the imperial cult was venerated, festive processions, liturgies

[25] Grabar 1963, 13.

[26] Saradi 2011, 95. Eusebius of Caesarea interprets and justifies the displaying of statues in a public place (thermae, hippodrome, forum) as Constantine's intention to expose pagan statues to the ridicule of the citizens. – Eusebius, *Vita Constantini,* III, 34.

[27] Papaioannou 2006, 95–116.

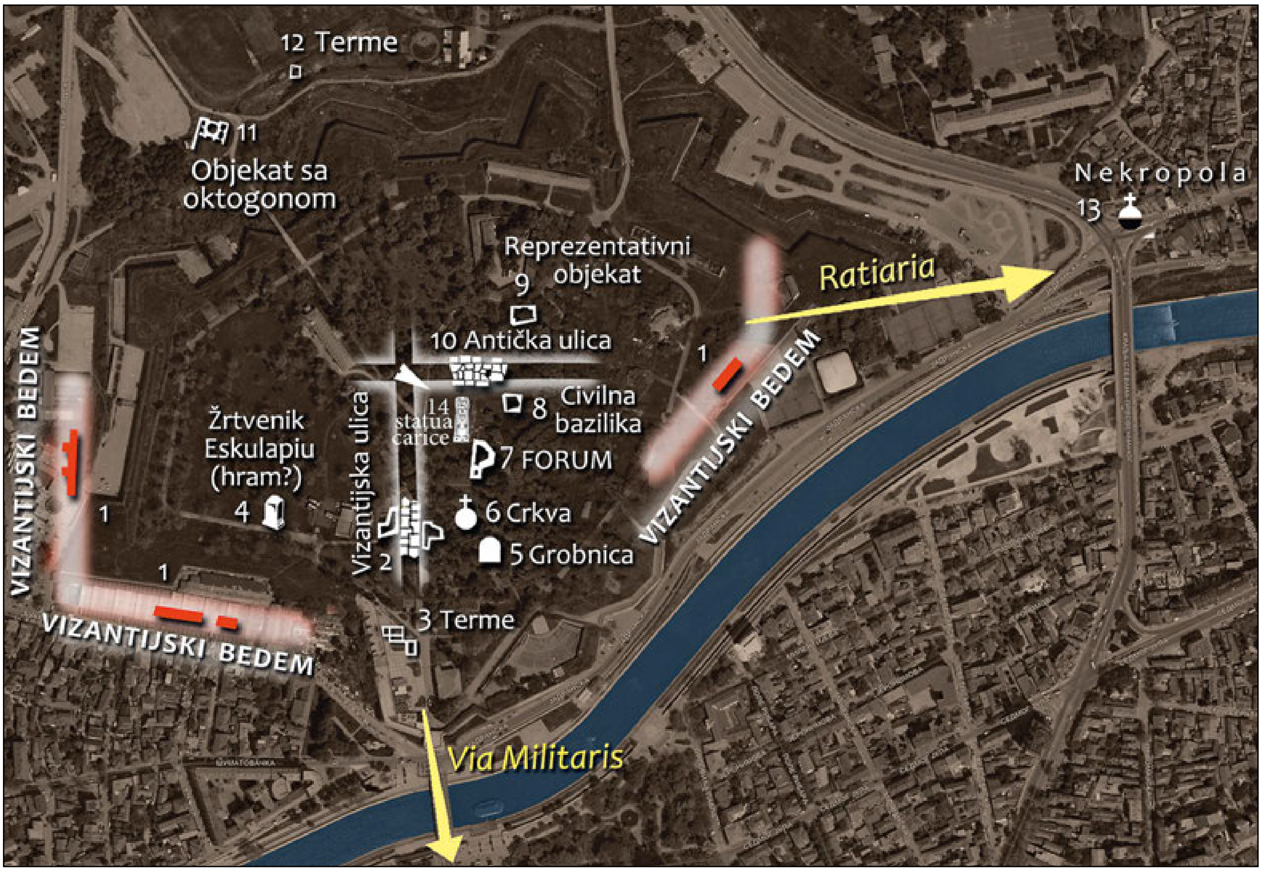


Fig. 15. Naissus – Ναισσος, urban topography from the 2nd to the 7th century:
1 – Justinian's rampart; 2 – Byzantine Street; 3 Terme; 4 – Altar of Aesculapius (temple?); 5 – Tomb; 6 – Church; 7 – Forum; 8 – Civil Basilica; 9 – Representative building; 10 – Roman Street; 11 – Building with octagon; 12 – Terme; 13 – Basilica of the Martyrs, necropolis; 14 – forum statue of the early Byzantine Empress (drawing by architect G. Radosavljević)

Сл. 15. Naissus – Ναισσος, урбана топографија од 2. до 7. века: 1 – Јустинијанов бедем; 2 – Византијска улица; 3 – Терме; 4 – Жртвеник Ескулапу (храм?); 5 – Гробница; 6 – Црква; 7 – Форум; 8 – Цивилна базилика; 9 – Репрезентативни објекат; 10 – Римска улица; 11 – Објекат са октогоном; 12 – Терме; 13 – Базилика мученика, некропола; 14 – форумска статуа рановизантијске царице (цртеж: арх. Г. Радосављевић)

and celebrations took place, and where people gathered. Therefore, those statues occupied an important place at the time of the transition from the Greco-Roman to the Byzantine civilization, but they were also often demolished by disaffected crowds.[28]

In the area of today's Niš fortress, not far from the presumed city forum of Naissvs, sculptures from different eras have been discovered at different times. A fragmented porphyry head of a tetrarch was discovered in 1954, dated to the period between 295 and 300.[29] A gilded bronze head of Emperor Constantine the Great was part of a life-size sculpture excavated in 1900,[30] and dated to the period between 327 and 335.[31] Additionally, in that area in 1931, a marble statue of an early Byzantine imperial woman, whose name we will never know, was discovered, with stylistic features that date her to the 6th century. (Fig. 14) All these statues, each in its own time, were placed in the urban topography of the city, presumably in the forum area.

[28] Berger 2001, 73–87; Ann Wainwright 2018, 9, 34.

[29] Срејовић 1959, 262.

[30] Rakocija 2001, 36–39, 58/9; Rakocija, 2013, 89–93, са литературом.

[31] Поповић 2005, 105/6.

The statue of the Byzantine Empress is a convincing testimony to the greatness and wealth of the early Byzantine and represents the urban continuity and continuation of civic practice from the antique Naissvs. The sculpture of the empress is an important document that Justinian's *renovatio Imperii*, in addition to rebuilding the ramparts of the city, "fortifying them and making them unconquerable to the enemy",[32] also involved the arrangement and renovation of buildings within the city.[33] Such safe city ramparts protected the citizens until the first decades of the 7th century, which enabled the population to organise its life, as well as artistic and construction activities.[34] The city life of the Roman Naisos died out in the years 615–617, after the Avar-Slavic conquest of the city.[35] Owing to the greater definition of this sculptural work, we can more accurately compile a picture of the urban content of the early Byzantine, which is insufficiently known both in terms of its name and its appearance. (Fig. 15)

Little has been preserved from early Byzantine secular sculpture.[36] This is the only known example from Byzantium of a relatively well-preserved early Byzantine life-size statue of a woman, made of marble. Statues from that period are rare because they represent the last examples of sculptures that prevailed in Antiquity, so that with the influence of Christianity, statues were carved less and less and slowly disappeared. Considering the fact that no completely comparable statue is known to us, from the method by which it was made to the material from which it was made, it seems that the Niš statue is unique and the only one known. This fact, however, does not mean that it was an exception at the time of its creation. Despite everything, efforts have been made to familiarise the scientific public with the Niš statue of the imperial woman and to find answers to the questions it raises. For Niš, its presence is confirmation of Justinian's reconstruction of the city and its beauty, to which local sculptors greatly contributed. We are of the opinion that we are not far wrong if we call her the "forgotten Byzantine Empress", who stood on the forum as testimony to the ideological concept and political propaganda of that time.

[32] Justinian built 34 new and rebuilt 8 fortifications in the vicinity of Naisos – Баришић 1955, 57, 58, 63.

[33] No information was known about Justinian's possible activity on buildings within the city ramparts – Rakocija 2013, 64.

[34] Rakocija 2013, 65.

[35] Баришић 1953, 98.

[36] A. Grabar 1963, 9

BIBLIOGRAPHY:

Ann Wainwright 2018 – L. Ann Wainwright, *Portraits of Power: The Representations of Imperial Women in the Byzantine Empire*, doctoral thesis, Universiry of Birmingham 2018.

Баришић 1955 – Ф. Баришић, *Прокопије*, у: Византијски извори за историју народа Југославије I, Београд 1955 (F. Barišić, *Prokopije*, u: Vizantijski izvori za istoriju naroda Jugoslavije I, Beograd 1955).

Баришић 1953 – Ф. Баришић, *Чуда Димитрија Солунског као историјски извори*, Београд 1953 (F. Barišić, *Čuda Dimitrija Solunskog kao istorijski izvori*, Beograd 1953)

Chatzidakis 1994 – N. Chatzidakis, *Greek art-Byzantine mosaics*, Atens 1994.

Cittadini 1938 – A. Cittadini, *Il costume nella storia dei popoli dell'Europa e dell'antico Oriente: abbigliamenti, acconciature, armi, arredamenti*, Bagnacavallo 1938.

Цветковић 2012 – Б. Цветковић, *Плашт српских деспота у 15. веку. Прилог проучавању*, Византијски свет на Балкану II, Београд 2012 (B. Cvetković, *Plašt srpskih despota u 15. veku. Prilog proučavanju*, Vizantijski svet na Balkanu II, Beograd 2012).

Firatli 1990 – N. Firatli, *La sculpture Byzantine figurée au Musée archéologique d'Istanbul, Catalogue*, Paris 1990.

Grabar 1963 – A. Grabar, *Skulptures Byzantines de Constantinople (IVe – Xe siècle),* Paris 1963.

Gerste 1997 – S.E.J. Gerste, *Saint Eudokia and the Imperial Household of Leo VI*, Art bulletin LXXIX, No. 4, New York 1997, 699–707.

Garland 1999 – L. Garland, *Byzantine Empress*, *Women and Power in Byzantium, AD 527–1204*, London and New York, Routledge 1999.

Houston 1947 – M. G. Houston, *Ancient Greek, Roman and Byzantine Costume*, London 1947.

Hartley, Hawkes, Hening, Mee 2006 – E. Hartley, J. Hawkes, M. Hening, F. Mee, *Constantine the Great: York`s Roman Emperor*, Published on the occasion of the exhibition, York 2006.

Иванишевић, Бугарски 2019 – В. Иванишевић, И. Бугарски, *Нови налаз дела царске статуе из Царичиног Града – Јустинијане Приме*, Лесковачки зборник LIX, Лесковац 2019, 9–19. (V. Ivanišević, I. Bugarski, *Novi nalaz dela carske statue iz Caričinog Grada – Justinijane Prime*, Leskovački zbornik LIX, Leskovac 2019, 9–19).

Кондић, Поповић 1997 – В. Кондић, В. Поповић, *Царичин град – утврђено насеље у византијском Илирику*, Галерија САНУ 33, Београд 1997.

Мано-Зиси 1974 – Ђ. Мано-Зиси, Царичин град, у: *Велика археолошка налазишта у Србији*, Београд 1974 (Đ. Mano-Zisi, Caričin grad, u: *Velika arheološka nalazišta u Srbiji*, Beograd 1974).

Николајевић 1957 – И. Николајевић*, Рановизантијска декоративна пластика у Македонији*, Србији Црној Гори, Београд 1957 (I. Nikolajević*, Ranovizantijska dekorativna plastika u Makedoniji*, Srbiji Crnoj Gori, Beograd 1957).

Parani 2007 – M. Parani, Defining Personal Space: Dress and Accessories in Late Antiquity, u: *Objects in Context, Objects in Use. Material Spatiality in Late Antiquity, Late Antique Archaeology 5*, ur. L. Lavan, E. Swift, T. Putzeys, Leiden, Boston 2007, 497–529.

Поповић 2021 – Б. Поповић, *Српска средњовековна владарска и властеоска одећа*, Београд 2021 (B. Popović, *Srpska srednjovekovna vladarska i vlasteoska odeća*, Beograd 2021).

Поповић 2005 – И. Поповић, *Дијадема на Константиновом портрету из Ниша настанак и развој нове царске инсигније*, Ниш и Византија III, (Ниш 2005), 105/6 (I. Popović, *Dijadema na Konstantinovom portretu iz Niša nastanak i razvoj nove carske insignije*, Niš i Vizantija III, (Niš 2005), 105/6).

Петровић 1976 – П. Петровић, *Ниш у античко доба*, Ниш 1976 (P. Petrović, *Niš u antičko doba*, Niš 1976).

Procopius 1888 – Procopius, *Of the buildings of Justinian*, (translated A. Stewart), London 1888.

Rakocija 2001 – M. Rakocija, *Cultural treasures of Niš*, Niš 2001, 97/8.

Rakocija 2013 – M. Rakocija, *The Constantine's city – ancient Christian Niš*, Niš 2013.

Ракоција 2006 – М. Ракоција, *О парапетној плочи из Ниша, пореклу и типологији палеовизантијских преграда*, Ниш и Византија IV, (Ниш 2006), 95–112 (M. Rakocija, *O parapetnoj ploči iz Niša, poreklu i tipologiji paleovizantijskih pregrada*, Niš i Vizantija IV, (Niš 2006), 95–112).

Срејовић 1959 – Д. Срејовић, *Портрет византијске царице из Балајнца*, Старинар IX–X/1958–59, (Београд 1959), 77–87 (Д. Срејовић, *Портрет византијске царице из Балајнца*, Старинар IX–X/1958–59, (Београд 1959), 77–87).

Срејовић 2018 – Д. Срејовић, *Два касноантичка портрета из Србије*, Жива антика IX, (Скопље 1959) (D. Srejović, *Dva kasnoantička portreta iz Srbije*, Živa antika IX, (Skoplje 1959)).

Вулић 1931 – Н. Вулић, *Ниш*, Споменик LXXI, д.р. 55, (Београд 1931), 103/104 (N. Vulić, *Niš*, Spomenik LXXI, d.r. 55, (Beograd 1931), 103/104).

Васић 1992 – П. Васић, *Одело и Оружје*, Београд 1992 (P. Vasić, *Odelo i Oružje*, Beograd 1992).

Špeher 2014 – P. Špeher, *The imperial statue from Iustiniana Prima*, Arheologija i prirodne nauke 9, 2014, 43–49.

Резиме: МИША РАКОЦИЈА, Завод за заштиту споменика културе Ниш

МЕРМЕРНА СТАТУА РАНОВИЗАНТИЈСКЕ ЦАРСКЕ ЖЕНЕ ИЗ НИША

Кључне речи. – Царска жена, царица, статуа, стола, Ниш, форум

Једина позната сачувана рановизантијска мермерна статуа жене у природној величини (вис. 1,52 м, шир. 0.43 м, деб. 0,20 м), у целом византијском царству, откривена је у Тврђави у Нишу 1931. године. То што је видно другачија од знаних античких скулптура са простора града, како у начину обраде и концепцији, тако и по досад невиђеној одећи на мермерним статуама, отворило је многе недоумице код истраживача, који су је оставили по страни не упуштајући се у њену стилску анализу, време настанка, кога представља и где је стајала.

Њену секундарну употребу као сполију откривају правилно распоређене округле рупе на телу и постољу, затим недостатак главе, али и потпуно обијена десна рука и видљива надлактица леве руке којој недостаје подлактни део са шаком. Сачуван надлактни део леве руке указује да су обе руке биле уз тело и савијене у лакту у висини појаса, тако да су груди остале видљиве.

На њој је до земље равна дуга хаљина (стола) са широким оковратником (μανιήκηφ) обрубљеним са две полукружне траке, као нека врста огрлице. Статуа је огрнута плаштом пребаченим на леђа преко рамена, тако да подсећа на царски плашт – огртач (*poludamentum*), причвршћен на раменима, изгледа, кружном фибулом. Плашт је тачно и зналачки представљен на полеђини статуе.

Отмена благо звонаста стола стегнута је испод груди једноставним широким појасом од тканине, испод кога су са предње стране подвучена оба његова краја, која падају праволинијски до испод колена а завршавају се дугим ресама. Ресе су тордиране и коси зарези су једино сведочанство о тежњи скулптора за минуциозном обрадом детаља, који су се с временом изгубили. Ту, у висини реса је на хаљини назначена широка трака у виду доње бордуре (опток) као део надахнутог кроја. Испод хаљине помаља се врх обуће. Стола је изнад појаса набрана тако да дискретно али тачно осликава груди. Дубоке паралелне канелуре дуж бочних страна у висини кука а испод лактова спуштају се до земље дочаравајући набирање тешке тканине. С једнаком пажњом обрађена предња и задња страна скулптуре указују да је стајала на отвореном простору, тако да је могла да се сагледа са свих страна. Поседује све карактеристике јавног споменика, свечан и тријумфални карактер, што је особеност царске уметности.

Скулптура је схематски обрађена од правих, помало грубих линија. Благо звонаста дуга хаљина схематизованих набора покрива тело од врата до обуће. Нишка скулптура је сачувала обрисе жене захваљујући слободним наборима изнад појаса обликованим тако да указују на лепоту облина груди, као још увек живо сећање на римску уметност. Фигура је дискретно струкирана захваљујући широком и високом постављеном појасу, при чему је наглашена издуженост и елеганција фигуре својствена женском телу. На овој скулптури још увек се огледа синтеза антике и хришћанства.

Стилска анализа указује на још увек живо античко наслеђе обједињено са хришћанским схватањима кроја хаљине и њена сличност са хаљинама жена из пратње царице Теодоре опредељује је у 6. век и Јустинијанову епоху. Мишљења смо да нишка статуа представља непознату царску жену која је стајала на почасном месту рановизантијског Наисоса (*Ναϊσσος*), једнако као статуа византијске царице Еуфемије, мајке цара Јустинијана, на тргу у невеликом утврђењу локалитета Кулина код Балајнца, или статуа цара Јустинијана на кружном форуму Јустинијане Приме (Царичин град).

На простору данашње нишке Тврђаве, недалеко од места на којем се, како се претпоставља, налазио градски форум Наисуса, у различитим временима откривене су скулптуре из различитог доба. Фрагментована порфирна глава тетрарха откривена је 1954. године, датована између 295. и 300. године. Позлаћена бронзана глава императора Константина Великог припадала је скулптури у природној величини и ископана је 1900. године, а опредељена у период између 327. и 335. године. Некако на том простору 1931. године откривена је и мермерна статуа рановизантијске царске жене опредељена у 6. столеће.

Статуа византијске царске жене убедљиво је сведочанство о величини и богатству рановизантијског Наисоса и представља урбани континуитет и наставак грађанске праксе из античког Наисуса.

UDC: 904:726.8(498)"05/06"
https://doi.org/10.2298/STA2272267M
Original research article

FLORIN MĂRGINEAN, Arad Museum Complex, Arad
ERWIN GÁLL, Romanian Academy, “Vasile Pârvan” Institute of Archaeology, Bucharest

“*THE OUTSKIRTS OF THE KHAGAN*”. THE FIRST “AVAR” CONQUERORS IN THE LOWER MUREȘ IN LIGHT OF THE GRAVES FROM PECICA “EST/SMART DIESEL”: ARCHAEOLOGICAL AND ^{14}C ANALYSES

e-mail: marginean.florin1979@gmail.com

Abstract. – The archaeological rescue excavation near Pecica resulted in the unearthing of nine graves with scant grave goods, which, on the basis of the aspects of the funerary ritual and ^{14}C analyses, could be dated to the period between the second part of the 6th century and first part of the 7th century. Taking into account the fact that these graves were dispersed over a very large territory (cca 1.8 ha), at a distance of dozens of meters from one another, without an organised character of a funerary location (like other cemeteries), with a heterogeneity of orientations, we suppose that these individuals were not related biologically, and they did not form a community, but that they were buried by different mobile communities at different times (pastoral nomadism). At the same time, based on the ^{14}C analysis, it became very clear that some of them, like the individual from the grave Feature 448 was part of the group of those “Avars” who conquered the regions of the Carpathian Basin before the year 568. From this point of view, we believe that we would not be too mistaken if we advanced the hypothesis that a certain nomadic life was maintained from the second half of the 6th century to the middle of the 7th century, adapted to the geomorphological realities of the Carpathian Basin, at least in a part of the community, in the frame of so-called mid-range *nomadism*.

Key words. – funerary space, graves, grave goods, offering, mobile communities, Early Avar Age

---

The archaeological rescue excavations of the past decade, carried out either due to investments in road infrastructure or as a result of construction work, have led to the discovery of new vestiges of the early medieval period in the Lower Mureş basin. The new topography that resulted from these excavations, with sites attributed with certainty to the Avar Age, in the space west and especially east of the town of Pecica, is a very complex one. This is due to the fact that the discoveries are connected equally to aspects related to habitat as well as funerary practices, which appear to cover the entire Avar Age.

In the present study we will only discuss the funerary discoveries of the “Est/Smart Diesel” point east of Pecica, which resulted from two rescue archaeological campaigns that took place in 2015 and 2017.

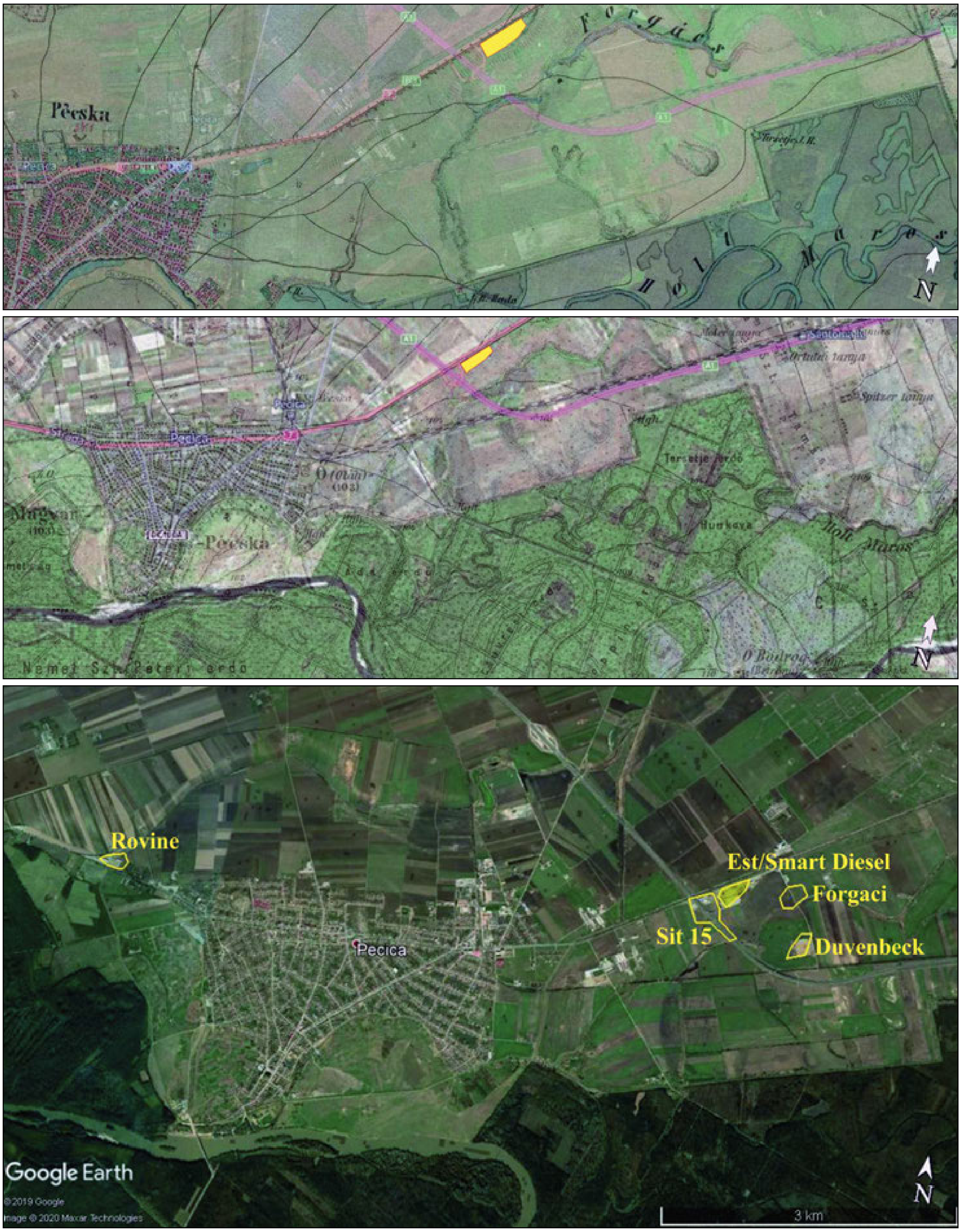
The corroboration and analysis of the other discoveries from the Pecica area, mentioned below, will surely complete the existing information gap with new data regarding the habitat and funerary practices of the end of the first Christian millennium in this microregion of the Carpathian Basin.

The complementary analyses made both in the case of the discoveries presented here, as well as other sites, some being currently processed, allow us to formulate some interesting working hypotheses regarding the lifestyle of the Avar Age.

Geographical location of the discoveries

The area where the funerary discoveries attributed to the Avar Age were made was located 2.5 km east of the town of Pecica (*Románpécska, Pécska, Ópécska, Petska* – Hungarian), close to the eastern bypass on the Nădlac – Arad highway, on a terrace on the right bank of the Mureș river (GPS coordinates of the site: 200592.7970 527515.7740; 200592.7970 527430.9110;

Manuscript received 1st March 2022, accepted 27th October 2022



A

B

C

Fig. 1. A–B) Location of the site according to the second and third Habsburg military topographic survey, overlapped by a current satellite image (taken from http://mapire.eu/en/);
C) The topographic distribution of the sites with funerary discoveries from the Avar Age in the Pecica area

Abb. 1. A–B) Lage des Geländes nach der zweiten und dritten habsburgischen militärischen Topographie, überlagert von einem aktuellen Satellitenbild; C) Die topographische Verteilung der Stätten mit Grabfunden aus der Awarenzeit im Pecica–Gebiet

200771.1944 527521.8035; 200712.4440 527581.7160; 200592.7970 527515.7740) (Fig. 1; Pl. I).

In the geographical context of the area in question, the most important modifications over time were recorded by the Mureș river, which changed its aspect permanently, due to natural phenomena as much as due to anthropic interventions, a fact demonstrated by the secondary arms still visible on the terrain. Practically, on Habsburg military maps, as well as on modern satellite images, it is apparent that the site is located on a terrace isolated from floods in the proximity of a meander, which emerges from a secondary arm that has kept its name until today – *Valea Forgacelor* (*Forgács* in hungarian). In turn, the latter emerges towards the south from another secondary arm named *"Mureșul Mort"* (*Holt Maros*), still active, which re-enters the river mouth near Pecica (Fig. 1).[1]

Research History

The area being discussed has been known in expert literature since the 1980s as being a rather interesting one, with sites that were located and investigated archaeologically, such as the one from Pecica "Forgaci".[2] Nothing would have indicated the extent of the traces of early medieval dwelling that were revealed during the archaeological rescue excavations started with the occasion of the construction of the pan-European highway corridor IV, but also as a result of the subsequent construction investments that followed. In this way, the discoveries from Site 15 on the Pecica – Arad highway,[3] or more recently the Pecica "Rovine"[4] and Pecica "Duvenbeck"[5] sites, are very important and worth mentioning in the context of our study, because through the correlation of the information thus obtained, we will bring consistent explanations as to the habitat and funerary customs of the Avar Age in our case.

In the frame of an intrusive archaeological diagnosis, the archaeological site initially named Pecica "Est/Smart Diesel" fuel station (Pecica Est), was identified and delimited. During two archaeological campaigns (2015 and 2017), 360 archaeological complexes were unearthed, and of these, 9 funerary complexes could be attributed to the early medieval period.[6]

Grave descriptions

Ftr. 8a (Pl. II, Pl. VIII)

Inhumation. Orientation: NE-SW (head towards sunrise). Shape of the burial pit: rectangular pit with rounded corners, and roughly straight walls. Length of the pit: 2.10 m. Depth: - 0.60 – 0.70 m compared to the contour level and – 1.30 – 1.40 m compared to the current level of limestone.

The grave was discovered during the archaeological diagnosis phase in the Trench 7 survey. The funeral pit cut a grave from the Eneolithic cemetery, the first deceased being sectioned directly through the basin area (it was called Ftr. 8b). The skeleton is in a very poor state of conservation and representation; the preserved cranial skeleton is partially destroyed due to its environment, and the postcranial skeleton was preserved in a very precarious conservation state. The individual was placed in the dorsal decubitus position. The fill was brown, with yellow clay lenses; a few Early Neolithic ceramic fragments were also found, most likely rolled from the culture level, and Eneolithic ceramic fragments, which were part of the funerary inventory of grave Ftr. 8b.

Sex: undifferentiated. Age: child (*infans I*), 5–7 (according to teeth- > I2 has not erupted yet). Skeleton length: could not be anthropologically determined; according to drawing cca. 130 cm.

Animal offering deposits:

1. Above the skull were found bird bones.

2. Ovine bones (from two individuals) deposited on the left side, kept at the contour level of the pit (A) and on the right side towards the bottom of the pit (B).

Funerary inventory:

1. On the left side of the skull, a hand-made pot was placed, with a flared lip etched with a zig-zag pattern before firing. Due to its precarious state, the reductively fired pot greatly deteriorated upon discovery. Estimated height: 12–15 cm (Pl. II/4).

2. From the neck area, three beads, differing in shape and colour, were recovered.

2.1. A prismatic white bead with slightly rounded ends. Measurement: 0.6 × 0.4 cm (Pl. II/1).

2.2. Flattened polyhydric hexagonal red bead made of carnelian. Measurement: 0.8 × 0.3 cm (Pl. II/2).

2.3. A prismatic very dark blue glass bead with bevelled corners (cuboid-octahedral). Measurement: 0.8 × 0.4 cm (Pl. II/3).

---

1 Posea 1997; Rusu 2007, 41. A valuable geomorphological analysis of the southern part of the Avar Khaganate: Bugarski 2008, 437–455. Regarding to Banat: Ivanišević, Bugarski 2008, 57–58.

2 Luca 1993, 49-84, Plan 1.

3 Unpublished. Information from Mihály Huba Hőgyes.

4 Gáll, Mărginean 2021, 203–223.

5 Gáll, Mărginean, Peter 2019, 28–35.

6 One of them (Ftr. 8a) was published by Mărginean 2017, 143.

Ftr. 406 (Pl. III, Pl. VIII)

Inhumation. Orientation: NW–SE. Shape of the burial pit: undetermined. Length of the pit: undetermined. Depth: - 0.5 m.

The skull was almost completely destroyed, only the left side of the mandible was in a position that suggests that the skull was turned to the right (NW). The deceased was placed in the dorsal decubitus position, with the arms outstretched alongside the body. The bones of the right hand are missing completely.

Sex: male. Age: 30–40 (on the basis of the tooth wear). Skeleton length: 161.34 cm.

Funerary inventory:

1. At the proximal end of the left humerus, a fragmented iron linkring (?) was preserved. Measurement: 8.8 × 6.1 cm.

Ftr. 408 (Pl. III, Pl. VIII)

Inhumation. Orientation: ENE–WSW. Shape of the burial pit: slightly trapezoidal, wider towards the lower limbs. Length of the pit: 0.98 m. Depth: - 0.18/0.20 m.

The burial pit of an Avar Age grave overlapped and partially cut a circular Eneolithic pit (Ftr. 419). The deceased was placed in the dorsal decubitus position, the skeleton having been partially disturbed.

Sex: undifferentiated. Age: *infans I*, 14–18 months (femur, tibia, molar). Skeleton length: could not be anthropologically determined; according to drawing cca. 70 cm.

Funerary inventory:

1. A ceramic pot deposited at the head, with alveoli pattern on the lip before firing. Measurement: 1. Height: 15.9 cm; 2. Width: 12.8 cm (Pl. III/1, Pl. XI/1).

2.1–2. Two glass beads placed at the chin. Measurement: 1. 1.1 × 1.0 cm, spherical in shape, cherry colour and decoration of white stripes in waves with yellow dots; 2. 1.1 × 1.1 cm, spherical in shape, cherry colour and a decoration in the middle area made of a strip of blue-green glass paste (Pl. III/2–3, Pl. XI/2–3).

Ftr. 412 (Pl. III, Pl. IX)

Inhumation. Orientation: NE–SW. Shape of the burial pit: rectangular with rounded corners. Length of the pit: 1.75 m. Depth: - 0.8 m.

The skeleton was not preserved in the anatomical position, the grave having been robbed in the past. All that is left of the skeleton is the tibia and phalanges of the right foot, two pieces of the mandible, two vertebrae, a rib and five fragments of the skullcap. After the anthropological analysis, it appears that the preserved bones belong to two deceased individuals. Considering that the grave was disturbed, it is difficult to say whether it is a double burial or whether some of the bones of the child have been rolled.

Sex: male, undifferentiated. Age: *Maturus*, >40; *Infans* II, 10–11 years old (on the basis of unossified epiphyses and dentition).

Funerary inventory:

1. Two fragments of a pot, with a flared lip etched in a zig-zag pattern before firing. Measurement: 1. 3.0 × 3.4 cm. - 2. 2.7 × 2.3 cm (Pl. III/1, Pl. XI/1).

2. Fragment of copper-based alloy near the pelvic girdle. In a very poor condition, has not been preserved.

Ftr. 430 (Pl. IV, Pl. IX)

Inhumation. Orientation: SW–NE. Shape of the burial pit: likely rectangular, with the corners towards the northeast sharply rounded. Length of the pit: 2.10 m. Depth: -1.05 m.

The deceased was dislocated from the pelvic girdle upwards, the grave most likely having been robbed in the past. All that has been preserved are the bones of the lower limbs. Skeleton length: undetermined.

Sex: undifferentiated. Age: >30, *Adultus/Maturus*.

Funerary inventory:

1. In the basin area, something that appears to be a piece of an iron blade was preserved, most likely from a knife. Measurement: 5.1 × 1.5 cm (Pl. IV/1).

Ftr. 431 (Pl. IV, Pl. IX)

Inhumation. Orientation: SW–NE. Shape of the burial pit: rectangular with slightly rounded corners. Length of the pit: 2.08 m. Depth: - 0.42 m.

The deceased was placed in the dorsal decubitus position, with the head inclined to the right and the arms outstretched alongside the body.

Sex: male. Age: 43–50, *Maturus*. Skeleton length: 168.44–172.36 cm.

Funerary inventory:

1. To the left of the left femur, a fragment of iron in poor condition, most likely from a knife.

2. At the proximal end of the left femur, a fragment of iron in poor condition, probably from a buckle.

Ftr. 437 (Pl. V, Pl. X)

Inhumation. Orientation: NE–SW. Shape of the burial pit: rectangular with slightly rounded corners. Length of the pit: 1.88 m. Depth: - 0.88 m.

The deceased was placed in the dorsal decubitus position. On the north-eastern side, it seems that a step was dug into the burial pit. Likely having been robbed, only a few pieces of the skullcap, the femurs and the right tibia were preserved *in situ*.

Sex: male. Age: >40, *Maturus*. The length of the skeleton could not be determined.

Funerary inventory:

1. On the right side of the head, a ceramic pot was deposited. Measurement: Height: 10 cm; Width: 9.1 cm (Pl. V/1, Pl. XII/1).

2. On the skull a piece of glass was discovered, probably a fragment of a glass bead.

Ftr. 448 (Pl. VI, Pl. X)

Inhumation. Orientation: E–W. Shape of the burial pit: rectangular with rounded corners. Length of the pit: 1.97 m. Depth: - 0.20 m.

The deceased was placed in the dorsal decubitus position, with the head inclined towards the right shoulder. The arms are outstretched alongside the body and the legs have the knees slightly apart.

Sex: female. Age: 40–50, *Maturus* II. Skeleton length: 150.68 cm.

Funerary inventory:

1. A ceramic pot placed on the right side of the head. Measurement: Height: 14.4 cm; Width: 10.5 cm (Pl. VI/1, Pl. XII/1).

Ftr. 455 (Pl. VII, Pl. X)

Inhumation. Orientation: E–W. Shape of the burial pit: rectangular with rounded corners. Length of the pit: 2.58 m. Depth: - 0.62 m.

The deceased was placed in the dorsal decubitus position. From the pelvis area to the skull, the skeleton was extremely disturbed, most likely having been robbed in the past, a fact suggested by the widening of the burial pit on the north-eastern side.

Sex: male. Age: >30, *Adultus/Maturus*. Skeleton length: 162.12–165.91 cm.

Animal offering deposits: from the basin area towards the phalanges of the lower limbs, the skull and bones of an animal were deposited.

Funerary inventories:

1. A bitronconic spindle whorl, next to the upper part of the right femur. Measurement: 1. 3.4 × 2.5 cm (Pl. VII/1, Pl. XII/8).

2–8. Different types of beads have been registered above the right forearm, among them some bipartite and spherical in shape. Measurements and colours: 2. 0.8 × 0.8 cm, yellow; 3. 1 × 0.8 cm, black; 4. 0.7 × 0.4 cm, blue-green, teal and blue; 5. 0.8 × 0.4 cm, green; 6. 0.8 × 0.3 cm, blue-green, teal and blue; 7. 0.6 × 0.3 cm, dark blue with cherry prints; 8. 0.5 × 0.4 cm, yellow (Pl. VII/2–8, Pl. XII/1–7).

3. A fragment of an iron buckle on the right pelvis. Measure: 2.6 × 1.5 cm (Pl. VII/9).

The analysis of the funerary space

Observations regarding the microtopography of the funerary area

Undoubtedly, the choice of site for a burial can be determined by religious and social-political considerations. However, as can be seen from the general plan of the 2015 and 2017 excavations (Fig. 2), the burials are very dispersed, within a perimeter of 0.84 ha, 120 m long and 70 m wide. Nevertheless, the funerary complexes linked to this period are few, nine in total (Ftr. 8a, Ftr. 406, Ftr. 408, Ftr. 412, Ftr. 430, Ftr. 431, Ftr. 437, Ftr. 448, Ftr. 455). It is not difficult to notice that, besides a group of five relatively compact graves (Ftr. 406, Ftr. 412, Ftr. 430, Ftr. 431, Ftr. 437), the other graves are spread over a larger area. Unsystematic inhumations, without any organisation of the funerary space, are in striking antagonism with organised funerary spaces, as is the case with the discoveries in the immediate vicinity dating to the late Avar period from Pecica "Site 15" and Pecica "Duvenbeck".[7]

Observations regarding the biological sex of the skeletons

The nine graves researched at Pecica "Est/Smart Diesel" stand out due to the fact that the analysed skeletons have proved to be, apart from one case, either males or *infansi.* In this manner, apart from Ftrs. 448, probably a mature female, skeletons Ftrs. 406, Ftrs. 431, Ftrs. 437, and Ftrs. 455 are mature males, and Ftrs. 8a, Ftrs. 408, Ftrs. 412 were *infansi*. At this moment we cannot answer the question regarding whether these individuals had biological links and whether any degree of kinship existed between them. However, because of the very poor condition of the skeletons, at this stage of the research we have serious reservations about being able to get samples for comparative DNA analysis between the skeletons.

[7] Gáll, Mărginean, Peter 2019, Fig. 2.

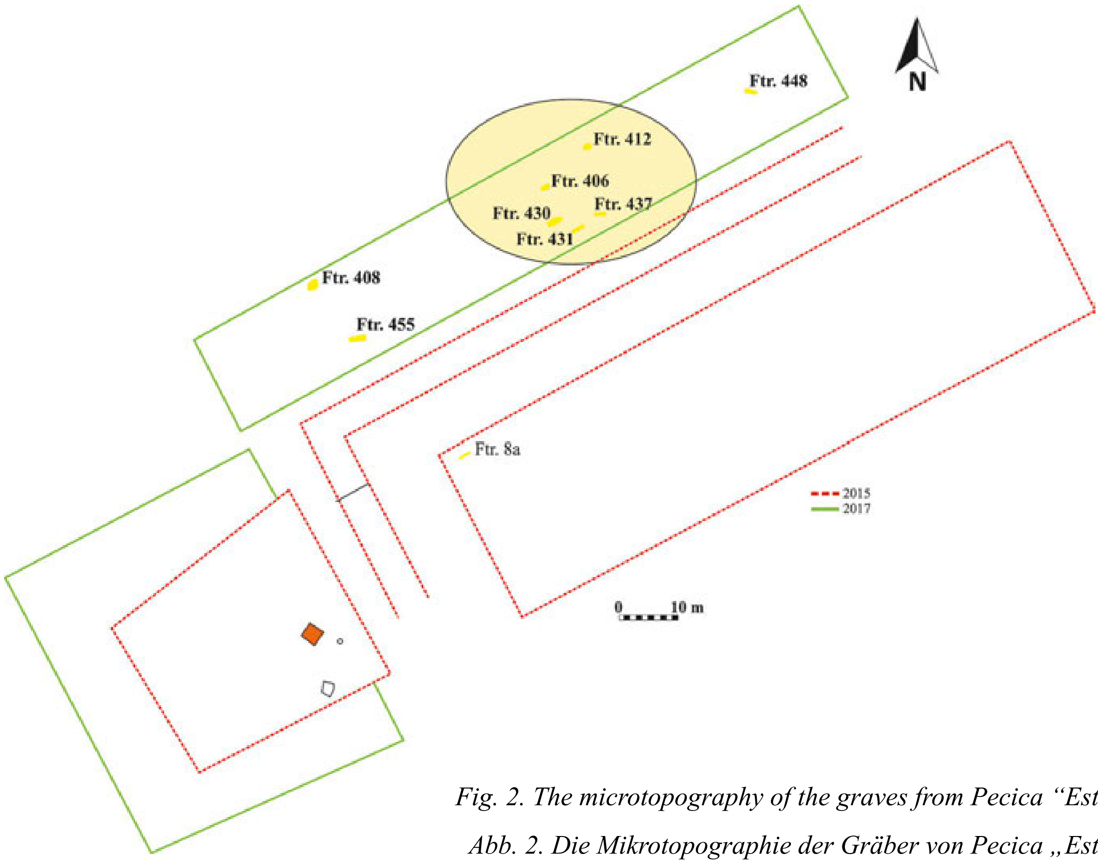


Fig. 2. The microtopography of the graves from Pecica "Est/Smart Diesel"

Abb. 2. Die Mikrotopographie der Gräber von Pecica „Est/Smart Diesel"

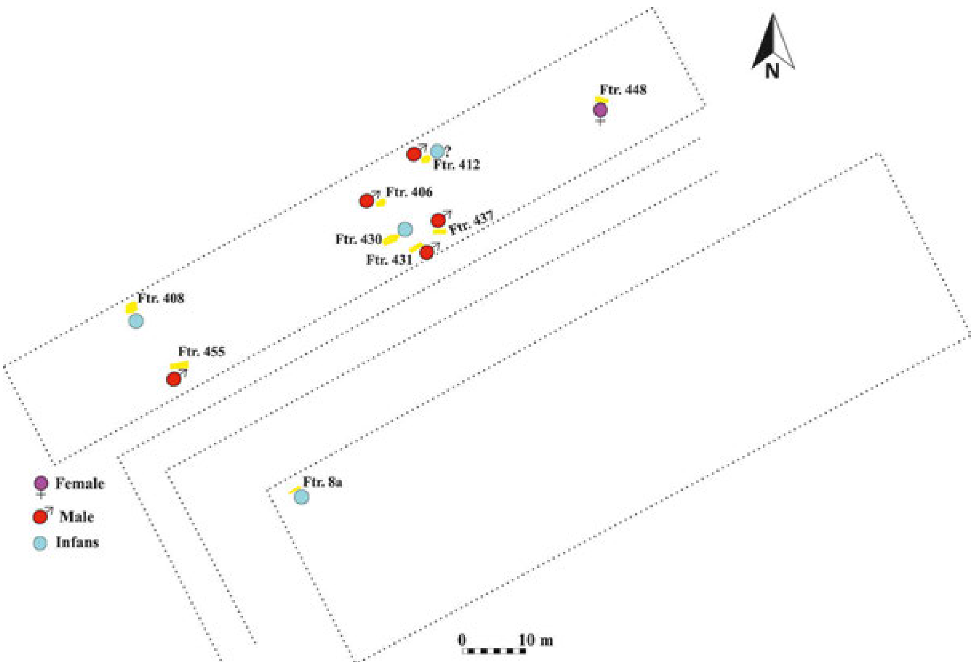


Fig. 3. The sex and age of the skeletons from Pecica "Est/Smart Diesel"

Abb. 3. Geschlecht und Alter der Skelette von Pecica „Est/Smart Diesel"

Disturbing and/or robbing of graves

Of the nine graves, four were surely disturbed and robbed in the past (Ftr. 412, Ftr. 430, Ftr. 437, Ftr. 455). Related to the phenomenon of grave robbing present at Pecica, it is not clear whether they were the results of simple plundering or ritualic acts. In some cases, such as Ftr. 412, Ftr. 430, and Ftr. 437, practically the entire skeletons were thrown out of the grave pits.

In the case of Ftr. 455, only the upper part of the body was disturbed, a large part of which was thrown out or destroyed. It is very strange that there is no trace of the skull in the grave, so in this case we could not exclude at all the ritualistic nature of the plunder.[8]

Funerary customs and rituals from Pecica "Est/Smart-Diesel"

Death, aside from birth, as in the case of every human community, represented the most important, but last event of life. Funerary rituals simultaneously reflect what community thinks about the phenomenon of death, what image it has of the afterlife, and how it maintains the continuity of the group after the loss of a member.[9]

A turning point in the complex series of funerary rituals, the threshold of the separation from the deceased, is the burial pit, which distances the deceased from the world of the living: for this reason, this is the focal point of the entire burial act. Consequently, the interpretation of the grave as a complex phenomenon requires a series of factors be taken into account. Apart from the image of the afterlife, the quantity and quality of the "inventory package" placed in the grave was strongly linked to the social status, the material possibilities of the deceased/their family and, of course, the manner and measure (the funeral) of the funeral representation in a given society and period.

The different aspects of the funerary practices, as well as the quality and quantity of the funerary inventory itself, were also tightly linked to the pain and emotion of the bereaved.[10] Likewise, it is important that the relationship between the deceased and the (micro)community is also differentiated in the sociological field. Consequently, at the time of death, this situation also reflects the funerary practices, particularly the quantity and quality of the funerary inventories deposited in the grave. Of course, the level of pain and, consequently, the reaction to the death of an old individual was different, as opposed to a young individual, who represented the promise of the continued existence of the (micro) community.

Based on these theoretical observations, we have tried to analyse the funerary space from Pecica "Est/Smart Diesel", which is undoubtedly noticeable through the simplicity of the funerary act. Of the nine graves, only the child's grave Ftr. 8a and the man's grave Ftr. 455 stand out.

Few observations can be made regarding the shape of the burial pits. We did not observe any special care in the case of any of the pits, being simply dug, the majority of a rectangular shape (Ftr. 8a, Ftr. 412, Ftr. 412, Ftr. 431, Ftr. 437), sometimes widened at the legs (Ftr. 431, Ftr. 448) or the torso (Ftr. 455). The apparent lack of attention given to the arrangement of the burial pit could be interpreted from a sociological perspective as the inferior status of the individuals buried in this funerary space, the poor condition of the micro community that performed the act of burials, or other causes could likely be found as well, such as a lack of time, inclement weather, etc.

Usually, the orientations of the skeletons were attributed to their conception of the world, their image of the afterlife.[11] Without taking a position in this regard, we can specify that the orientations present great heterogeneity, which shows us that, in the case of this funerary space, the orientations cannot be considered a well-determined custom, suggesting different (micro)communities that carried out these acts. Thus, graves Ftr. 406, Ftr. 430, and Ftr. 431 are oriented in the WSW–ENE relative direction, while the rest of the graves are in the opposite direction, but these have not been absolutely registered in a completely unitary direction either: Ftr. 437 was registered in an E–W direction, Ftr. 455 with very little difference, Ftr. 8a, Ftr. 408, Ftr. 412 in an ENE–WSW direction, and Ftr. 448 in an ESE–WNW direction. We will return to this aspect in more detail in the conclusions at the end of this study.

We have also documented a grave with a lateral niche, the Ftr. 437 grave, a custom which, according to

---

[8] Related to the ritual acts of the dislocation of the skull, see: Kovrig 1963, 71–72; Tomka 1977–1978, 50.

[9] For the funeral ritual see, for example: Daim 2003, 42–44; Effros 2003; from the perspective of the means regarding the use of the funeral as a social-political representation, see Parker Pearson's analysis: *"Tombs are not just somewhere to put bodies: they are representations of power. Like ritual, funerary architecture legitimizes and extends the hegemonic order".* Parker Pearson 2000, 196: note 2.

[10] Brather 2008, 255, Fig. 5.

[11] K. Kovács 1944, 418.

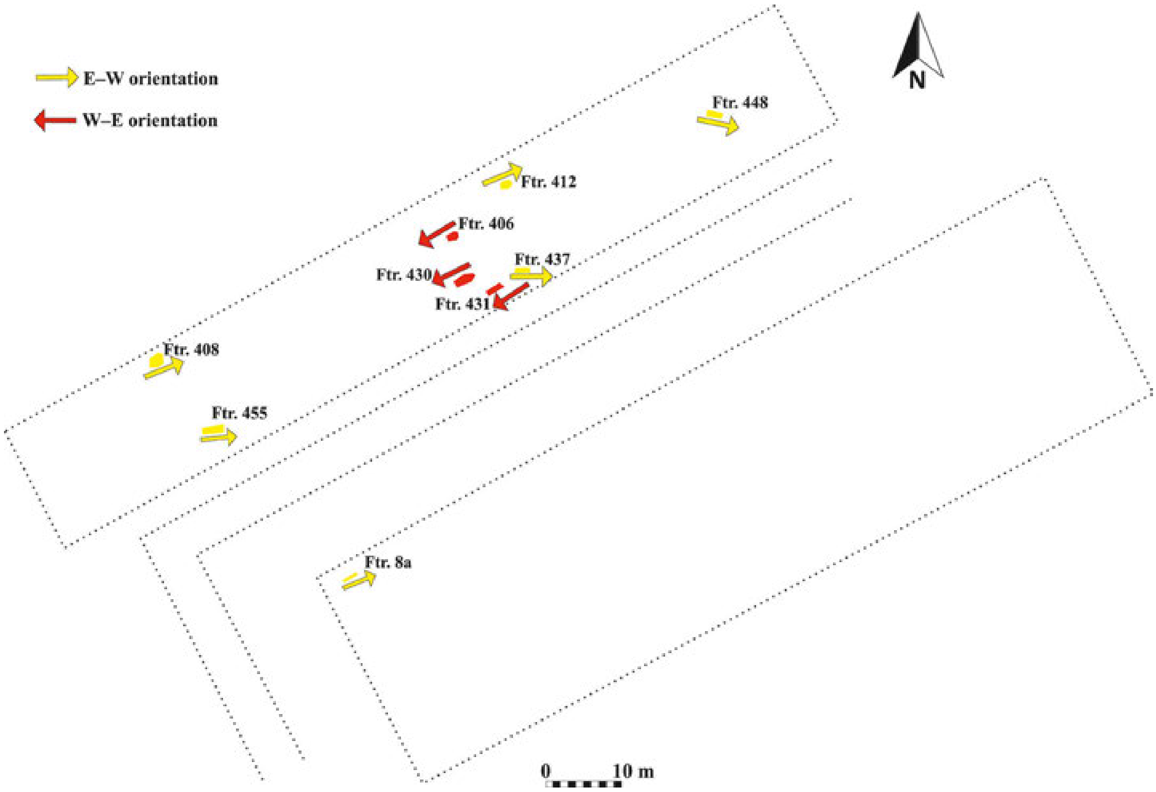


Fig. 4. The orientation of the skeletons at Pecica "Est/Smart Diesel"

Abb. 4. Die Ausrichtung der Skelette bei Pecica „Est/Smart Diesel"

some opinions, would be characteristic of the region east of the Tisa.[12]

The defining characteristic of the burial ritual in this microregion of the Carpathian Basin, found throughout the Pecica site, is undoubtedly the deposition of sacrificed animals and food offerings.

Of the animals used for this purpose, we can only note the fact that parts of a sheep were deposited in a grave, very probably in its skin. Due to the fact that robbery affected a great part of grave Ftr. 455, the probable position of the deposited sheep parts cannot be specified exactly, but it is certain that the sacrificed animal was placed over the deceased; the skull of the animal was registered on the lower part of the left tibia. In the case of Ftr. 8a, likely the grave of a girl, however, the ovine bones were found in different areas (above the left foot and on the right side of the basin) and at different depths in the grave, which indicates, in this case, different chronological phases of the ritual of deposition of the two individuals.

To date, on the territory east of the Tisa, apart from a small number of animals that were deposited whole (only horses with a harness and in some cases sheep, sometimes a calf),[13] the situations in which only sectioned parts (generally the lower or upper limbs)[14] of these animals were deposited were far more numerous.

In the case of grave Ftr. 8a, we have also identified bird (*gallus domesticus*) offerings around the head, which in the period in question (generally the 7th century) are a rarity.[15]

At the same time, the large number of ceramic pots deposited in the graves also constitutes an interesting case (5 pots from 9 graves): Ftr. 8a, Ftr. 408, Ftr. 412, Ftr. 437, Ftr. 448.[16] The practice of depositing pots with food or drink in the case of the Pecica "Est/Smart

[12] Lőrinczy 1998, 343–372; Lőrinczy 2016, 155–165; Lőrinczy 2017, 137–165.

[13] Gulyás 2017, 499; Gáll, Mărginean 2020, Figs. 8–9.

[14] In this regard, see: Gáll 2017, 123–125; Gáll, Mărginean 2020, 373–407.

[15] In this regard, see: Gáll 2017, 123–125.

[16] For a short analysis of the deposition of pots in graves, see: Lőrinczy 2016, 161; Lőrinczy 2017, 154–155.

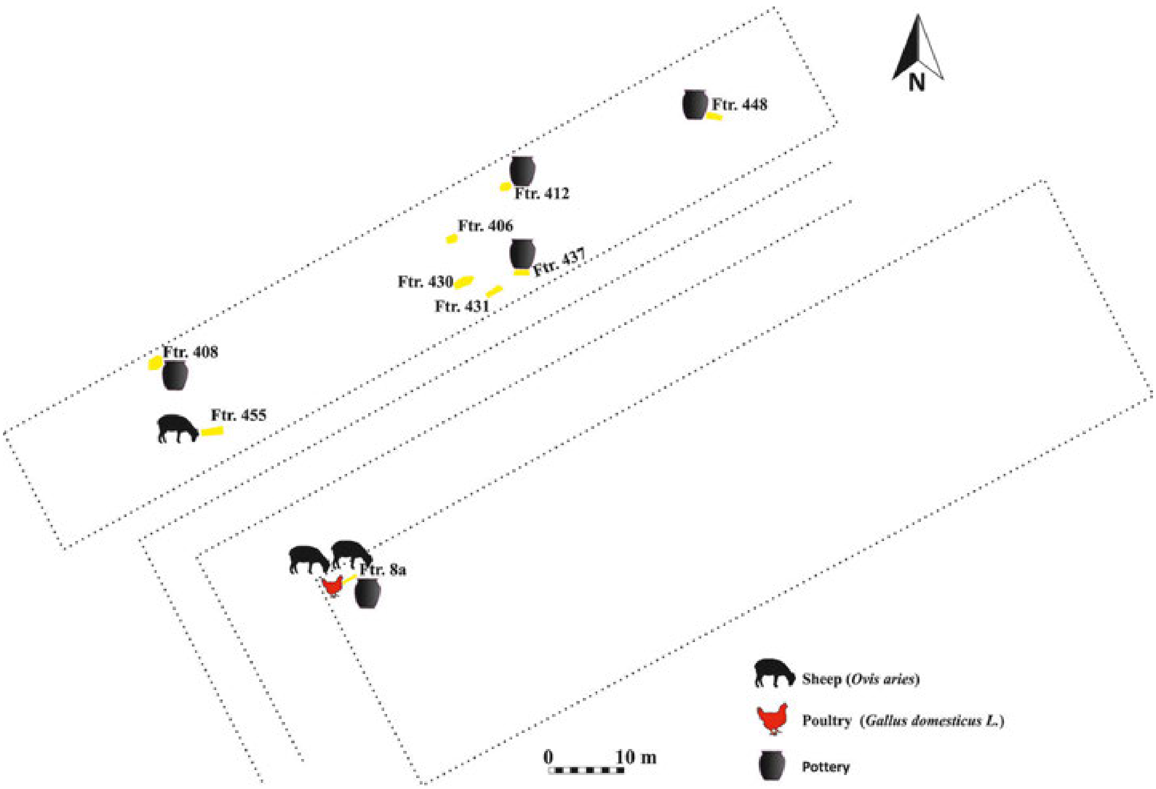


Fig. 5. The animal offering, and recipients for food and drink

Abb. 5. Das Tieropfer und die Empfänger für Speisen und Getränken

Diesel" graves cannot be linked to sex or age, since Ftr. 8a, Ftr. 408, Ftr. 412 were *infansi*, whereas Ftr. 437 was a male, and Ftr. 448 a female.

Material culture

Although out of the nine funerary complexes, five were disturbed and robbed, generally the material culture of the individuals buried at Pecica "Est/Smart Diesel" can be considered a very modest one, like the burial grounds from Nădlac-1M,[17] Felnac-Complexul Zootehnic.[18]

It must be mentioned that all the pots were handmade, of a fabric in which medium grained sand was used as a temper, and all were fired reductively. There are no decorative elements on the bodies of the pots, and are only three of the pots have alveoli on the lip or an etched lip.

The pots with a flared lip etched with a zig-zag pattern before firing, discovered in Ftr. 8a and Ftr. 408, can be widely dated from the second half of the 6th, specifically in the first three quarters of the 7th century, being included in T. Vida's typology in types *IIID$_1$/g* (Ftr. 8a),[19] *IIID$_4$/a* (Ftr. 408).[20] Only a lip fragment was preserved from the pot deposited in Ftr. 412 (maybe the *IIID$_1$/a3* type-variant?). The other two pots are common, and can be included in the *IIID$_5$/c$_2$* (Ftr. 437) and presumably *IIID$_5$/a$_2$* (Ftr. 448) category.[21] If we take into account their chronology dating – as we can see

[17] Gáll, Mărginean 2020, 373–407.

[18] Mărginean, Băcueț 2015, 215–226.

[19] The analogies of the *IIID$_1$/g* type-variant: Rákóczifalva Grave 8 (Cat. no. 732), Szeged-Fehértó A Grave 128 (Cat. no. 732), Várpalota-Gimnázium Grave 232 (Cat. no. 793), Vrbas (Cat. no. 797). Vida 1998, 283–284, 288.

[20] In the category *IIID$_4$/a* can be listed the pots from Előszállás-Öreghegy, Grab 56 (Cat. no. 655), Târgu Secuiesc (Cat. no. 674), Nagyhalász-Homoktanya (Cat. no. 711), Perlász/Perlez (Cat. no. 725), Solt-Szőlőhegy Grave 18 (Cat. no. 736). Vida 1998, 276, 278, 281–283. *"Im Fundmaterial läßt sich der Kreis jener Typen eingrenzen, deren nahestehende Analogien aus der Steppe bekannt sind. Nahe Parallelen der zu den Typen IIID/a/f gehörenden Gefäße (Budakalász, Cat. Nr. 576; Verbász/Vrbas, Cat. Nr. 796, 797; Mór, Cat. Nr. 706) kamen in der osteuropäischen* ***Steppe aus nomadischen Bestattungen*** *des 5.-7. Jh. zum Vorschein."* Vida 1998, 141, Abb. 58.

[21] Vida 1998, 144–145, Abb. 58–59.

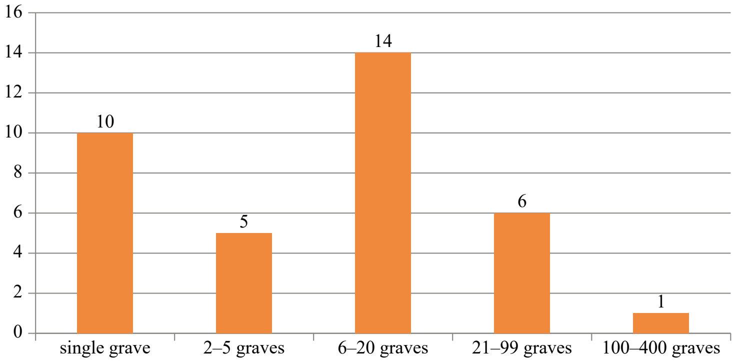


Fig. 6. The number of sites based on the quantity of graves investigated

Abb. 6. Die Anzahl der Standorte basiert auf der Anzahl der untersuchten Gräber

later – on the basis of the ^{14}C analyses should be modified (much more in the case of the pot from Ftr. 8).

The different types of beads offer us a dating that is not much more precise. Of these, the binomial/bipartite (made of two parts) beads discovered in Ftr. 455, which Adrien Pásztor dates widely from the 6th to the 8th century,[22] stand out. The prismatic ones, which are documented in the Avar setting in the 7th century (Ftr. 8a) or the cylindrical ones (Ftr. 455), specifically those decorated with embossed strips on the surface (Ftr. 455),[23] cannot be dated more precisely either.

If in the two graves, Ftr. 8a and Ftr. 408, little girls were buried, we must pay attention to the beads in Ftr. 455. Being the grave of an *adultus/maturus* man, and having been robbed, the presence of the 7 beads together with a spindle whorl seems like an oddity. Considering that there are cases in which beads appeared in men's graves,[24] such an interpretation cannot be excluded in this case either.

Careful Conclusions

The Pecica area and the communities in the Lower Mureș region in the Early Avar Age

Without extrapolating the available data, we must specify that the rescue excavations of recent decades, prompted by various investments in building, infrastructure, etc. on large areas in Hungary and Romania, have shown us that funerary places of a few graves represent sociological realities of the second half of the 6th and the first part of the 7th centuries, detectable due to archaeology. In this sense, we have formulated a statistic regarding the number of graves from the sites investigated in the Lower Mureș basin up to the confluence with the Tisa. Of the 677 reported graves, only in one case, in Makó, do we know of a large number of graves (251) in a funerary space, otherwise, the vast majority are isolated graves and small groups (or funerary spaces) containing between 1 and 20 graves. After this analysis, due to the state of research, the number of graves in archaeological excavations can be divided into 5 large groups: *A. Single graves: 10 cases; B. 2–5 graves: 5 cases; C. 6–20 graves: 5 cases; D. 21–99 graves: 5 cases; E. 100–260 graves: 1 case* (see Fig. 6).

What could this phenomenon mean in relation to the sociological realities of the Early Avar Age (second half of the 6th and the first part of the 7th century)? Based on the statistics of the number of graves, in this phase of the research, we find relevant the important number of funerary sites (15) that contain only a few graves (from one to five), and likewise, those sites with up to only 20 graves remain important. In their case, in the future, research should be oriented towards carrying out simultaneous comparative genetic analyses and ^{14}C analyses, because only through these two natural science methods can we confirm or refute the previously stated hypothesis.

Consequently, the number of individuals from these funerary places (isolated graves and small groups containing between 1 and 20 graves, contrary to larger funerary sites) suggests the coexistence in the Lower Mureș area of different types of communities with different lifestyles. From the previous observation, a working hypothesis can be advanced: the very different number of graves could reveal different sociological realities and lifestyles in the spectrum of the end of the 6th century and the first two thirds of the 7th century in the *Transtisa* area.[25]

---

[22] Pásztor 2008, Tab. 2.

[23] Pásztor 2008, Tab. 2.

[24] For example, in the Szekszárd-Bogyiszlói út necropolis, beads from 12 men's graves are known, and from Szegvár-Oromdűlő, 9 men's graves are known to have contained beads in their inventory. Pásztor 2001, 115–116, note 13.

[25] Gáll, Mărginean 2020, Fig. 12.

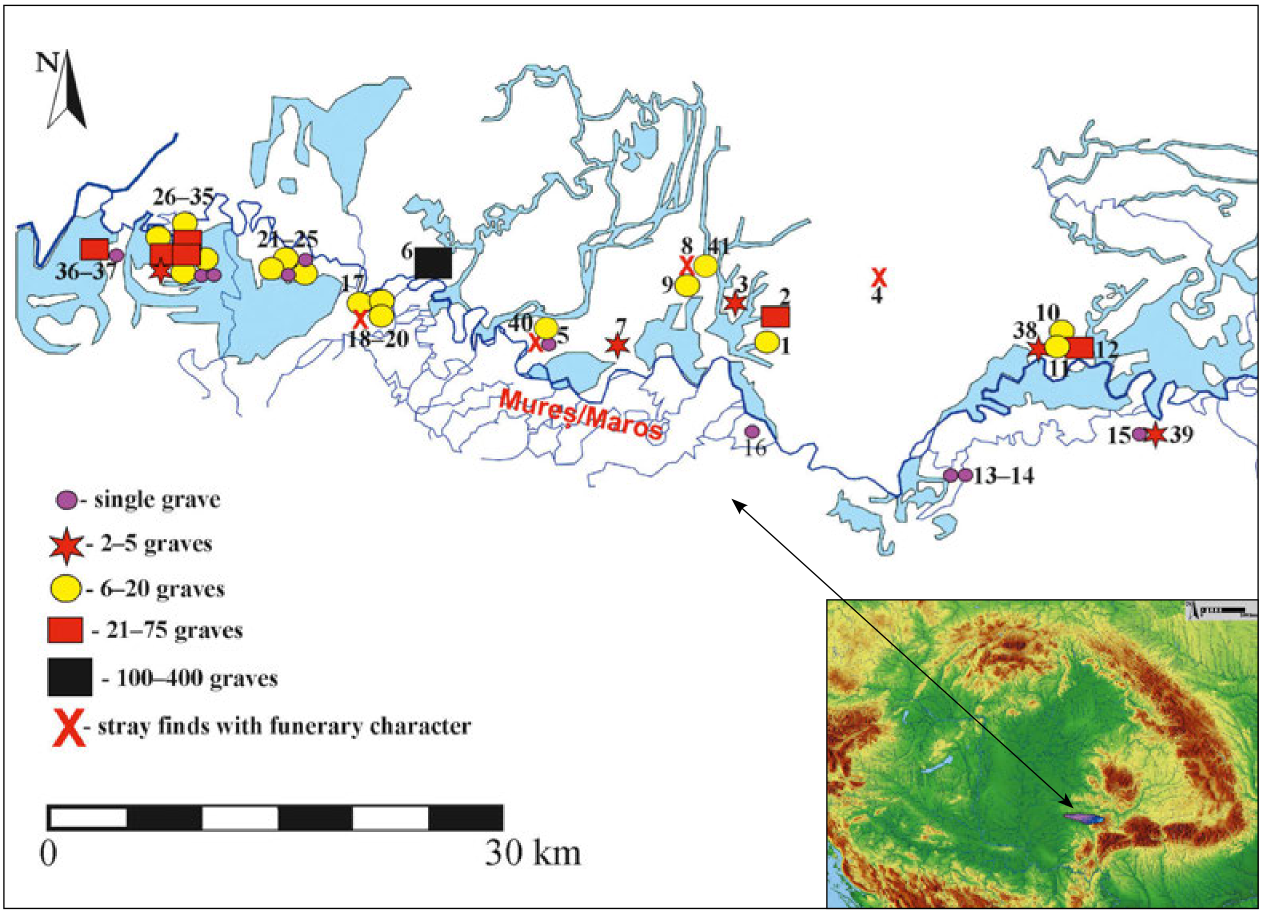


Fig. 7. The distribution of the funerary sites in the first part of the Avar Age in the Lower Mureș Valley (the fully researched funerary sites are marked in **bold***)*

Abb. 7. Die Verteilung der Grabstätten im ersten Teil der Awarenzeit is Unteres Mureș-Tal (die vollständig erforschten Grabstätten sind **fett** *markiert)*

1–3. **Nădlac 9M** *(10 Gräber), 3M-N (24 Gräber),* **1M** *(4 Gräber); 4. Peregu Mare (Streufund); 5. Apátfalva (1 Grab); 6.* **Makó-Mikocsa halom** *(251 Gräber); 7. Magyarcsanád-Bökény (ein paar Gräber); 8. Csanádpalota (Streufund); 9. Kövegy-Nagy-földek (17 Gräber, 2 Gruben); 10.* **Pecica-Est/Smart Diesel** *(9 Gräber); 11–12.* **Pecica-site 15/cluster A** *(3 Gräber) and* **Site 15/cluster B** *(14 Gräber); 13–14. Sânpetru German-Goliat (eine Opfergrube) and Magazin (1 Grab); 15. Felnac-Magaspart (1 Grab); 16. Sânnicolau Mare / Saravale – Mina Major (1 Grab); 17–20. Kiszombor-sites B (8 Gräber), E (13 Gräber), J (1 Grab), and O (7 Gräber); 21. Ferencszállás-Lajtár Gy.Halma (8 Gräber); 22–25. Klárafalva-sites B (17 Gräber), C (1 Grab), G (6 Gräber), and Hegyesi földje (1 Grab); 26–35. Deszk-sites D (12 Gräber), G (58 Gräber), H (22 Gräber), L (13 Gräber), O (8 Gräber), P (Ferencszállás-Kukutyin) (6 Gräber), R (5 Gräber), S (1 Grab), Sz (1 Grab), and T (71 Gräber); 36–37. Szőreg-Homokbánya (1 Grab) and Téglagyár (23 Gräber); 38.* **Pecica-Rovine/Căprăvanul Mic** *(2 Gräber mit 4 Skeletten); 39. Felnac-Complexul Zootehnic (1 Grab); 40.* **Apátfalva-Nagyút dűlő-M43 Site 43** *(9 Gräber); 41. Csanádpalota-Juhász T. Tanya M43 Site 60 (4 Gräber)*

(Bibliographie: ADAM 2002, Vol. I: 24, 110–113, 139, 201–202, 204–206, 230–231, 366; Balogh 2014, 97, 3. kép 2; 2. táb. 3; Balogh 2016b, 109–120; Benedek, Marcsik 2017, 369–442; Csallány 1939, *122, 126–129, 137, 140, 170, Taf. I/2, IV, VI, VIII/6–12;* Csallány 1940, 122, *Pl. XVI/8*; *Csallány 1943, 160–173; Csallány 1961, 140–141, 147, Abb. 18, Taf. CCVIII;* Csallány *1968, 59–70;* Csallány *1969–1971, 13–16 and Abb. 1; Taf. I–II;* Dömötör 1901, *62*–66; *Cseh, Varga 2017, 443–477; Dörner 1960, 423–433; Dörner 1970, 456; Gáll 2017, 22–25, 116–143, Pl. 3–9, 92–136, 205–229, 244–254; Gáll, Mărginean 2020, 373–407; Gáll, Mărginean 2021, 203–223;* Hampel 1900, *117*–123; *Hampel 1905, Vol. II.: 392–396, Figs. 1–26, 747–751; Vol. III.: Taf. 446;* Kalmár 1943, *152–155, Pl. XXIV/11; XXV/2, 17; Kisléghi Nagy 1911, 319: kép; Kisléghi Nagy 2010, 86; Kiss 1962, 154; Lőrinczy 1994, 328–330; Mărginean 2017, 145–146, Pl. 3; Mărginean, Băcueţ 2015, 215–226; Medeleţ 1998, 307–316; Móra 1932, 56–59; Szeverényi 2019, 32)*

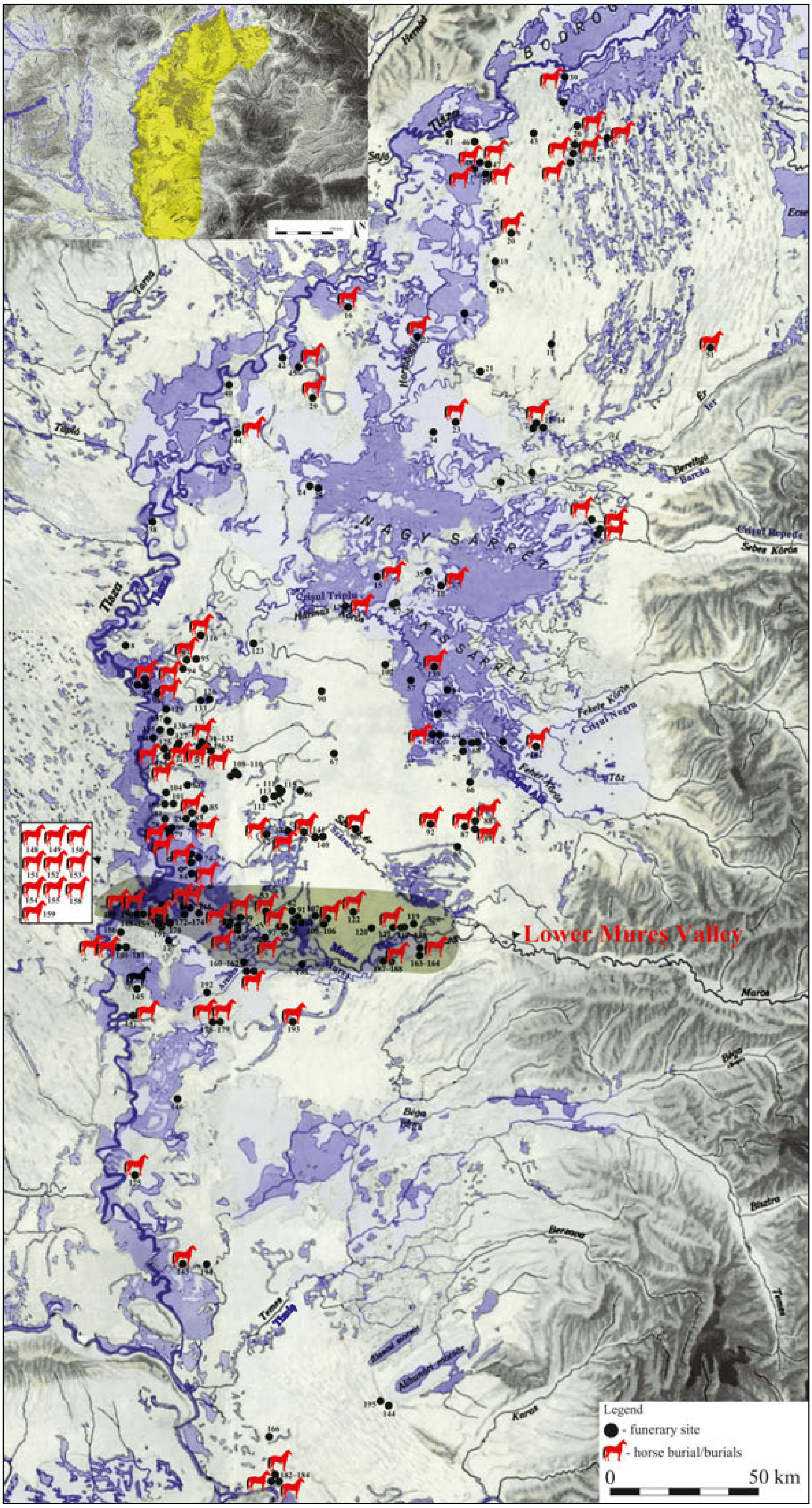


Fig. 8. The distribution of the funerary sites in the first part of the Avar Age in the regions of Transtisa and the Lower Mureş Valley (after Gáll, Măgureanu 2020, Fig. 12 updated)

Abb. 8. Die Verteilung der Grabstätten im ersten Teil der Awarenzeit in den Regionen Transtisa und Unteres Mureş-Tal (nach Gáll, Măgureanu 2020, Fig. 12 aktualisiert)

Dating of the graves from Pecica "Est/Smart Diesel": a funerary space of mobile communities or a burial ground of a micro community?

Undoubtedly the main scientific issue regarding the early Avar Age chronology is how the earliest graves (second half of the 6th century) could be separated from the later burials. In general, in the cases of funerary sites in the Carpathian Basin, this problem has remained an unresolved question.[26]

However, the dating of the graves from "Est/Smart Diesel" scattered in this micro space is made difficult by the very poor material, and because of this, the chronological observations have been based on the first phase and on certain aspects of the funerary practices. With regard to the material culture, in the absence of other artifact categories with more precise dating, the only elements that we could use were the ceramic pots and the beads that were discovered.

As archaeology has shown in the last decades, one of the main characteristics of 6th–7th century burials in the *Transtisa* area is the orientation of the graves with an E–W tendency (the majority), but we know a lot of cases with N–S, and fewer with W–E orientations.[27]

At Pecica "Est/Smart Diesel", of the 9 graves, 3 are oriented W–E, which is a general tendency in the case of late Avar Age necropolises of this region, but not in the first phase of the Avar Age. No ceramic pot deposits were documented from these graves, which underlines again the problem of the different dating of these graves. However, unlike the E–W oriented graves, the W-E oriented graves, except for a few pieces, did not have any type of inventory.

As a result, based on the above, it became very clear that a more precise dating of the graves would only be possible using ^{14}C analysis.

The four ^{14}C samples collected from this group of graves researched in Pecica "Est/Smart Diesel" have been selected according to the principle of the location of the graves inside the funerary area, but also based on the presence of funerary inventories or offerings. In the present case, performing a typo-chronological analysis of the inventory items would be less relevant without combining them with similar data obtained from other sites discovered in the same micro-region.

Regarding the chronology of this funerary area, if the nine graves belong to a single micro-community, the analysis of the ^{14}C samples indicates an early period of use, very likely dated during the 6th century (600), but one cannot entirely exclude its dating to the second half of the 5th century (439), as suggested by the results of the sample from Ftr. 448. Still, the Bayesian analysis shows that it is much more likely that the earliest sample (Ftr. 448), with the mean point in 541 AD (95.4 %), belongs to the 6th century (Fig. 9/A–B). The time when this funerary area went out of use is provided by the results of the analysis of the samples from Ftr. 455, namely sometime between the first half of the 7th century (606) and after the middle of the 7th century (664), with the mean point in 642 (95.4 %). This indicates that the early period of use of this funerary space can be dated after the middle of the 6th century and the latest inhumation horizon was just after the middle of the 7th century. One should also mention that, based on the four samples, three of the graves (Ftr. 8a, Ftr. 437, Ftr. 455) can be dated after the year 600 (Figs. 9/A–B; 10/A–B).

Taking into account the fact that these graves were dispersed over a large territory (cca 1.8 ha), at a distance of dozens of meters from one another, without any organised character of the funerary place (like other cemeteries), and with a heterogeneity of orientations, we suppose that these individuals were not related biologically and did not form a community, but that they were buried by different mobile communities at different times. In conclusion, it seems that the so-called "individual dating" of these graves could be the best method for understanding the character of this funerary place. If we take into account the individual calibration of the ^{14}C samples, we could observe the very different dating of these graves, one of them very definitely before 600 AD, and two others after 600, in the first half of the 7th century.

As a consequence, ^{14}C AMS data from Pecica-"Est/Smart Diesel" Grave 448 (between 439–600), Nădlac-1M Grave Ftr. 86 (the burial has been dated between 532–606 AD),[28] and other graves from Makó-Mikocsa halom,[29] challenges us to ask the question: **before the year 568 could other migrations from east towards the Carpathian Basin have happened?**

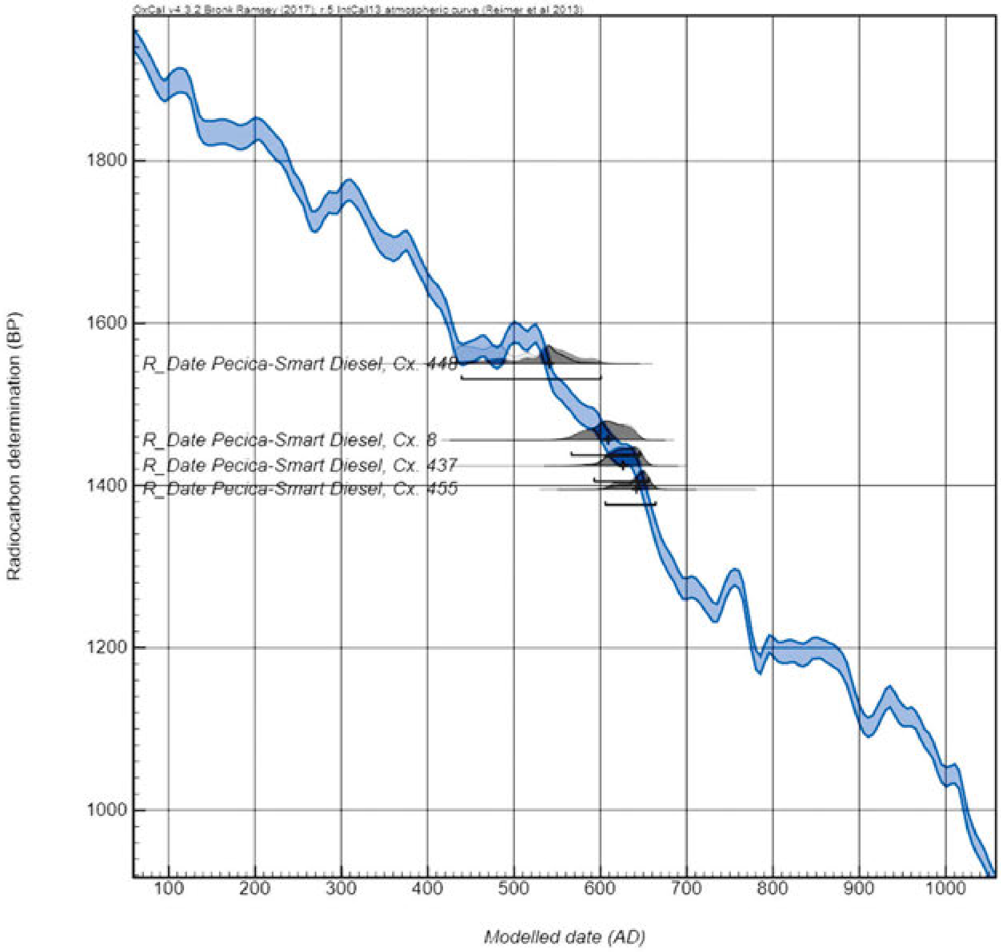
---

[26] According to Tivadar Vida and Walter Pohl the Avars arrived in the Carpathian Basin with puritanical trappings and only around the turn of the century did they adopt Byzantine-style jewellery and accessories. These observations are realistic and could be accepted. Vida 2016, 259; Pohl 2018, 109.

[27] Lőrinczy 1992, 155–171. Other nuanced opinions, see: Gáll, Mărginean 2020, 385, 387, 397–398.

[28] Gáll, Mărginean 2020, 388: Fig. 11.

[29] Gulyás et al. 2018.



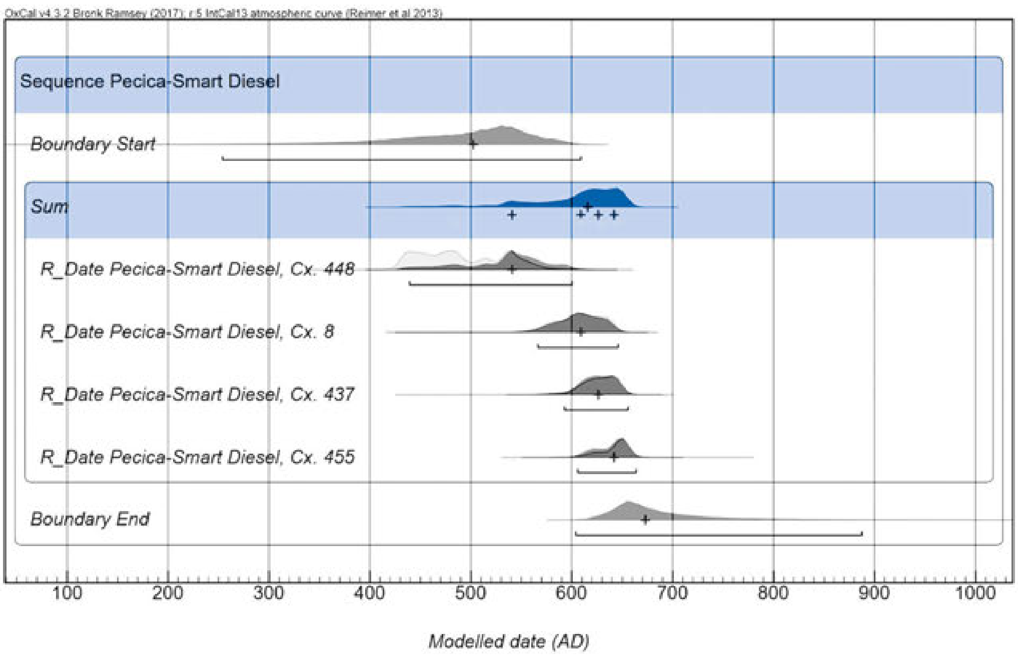


Fig. 9. The Bayesian analysis of the ^{14}C samples

Abb. 9. Die Bayessche Analyse der ^{14}C-Proben

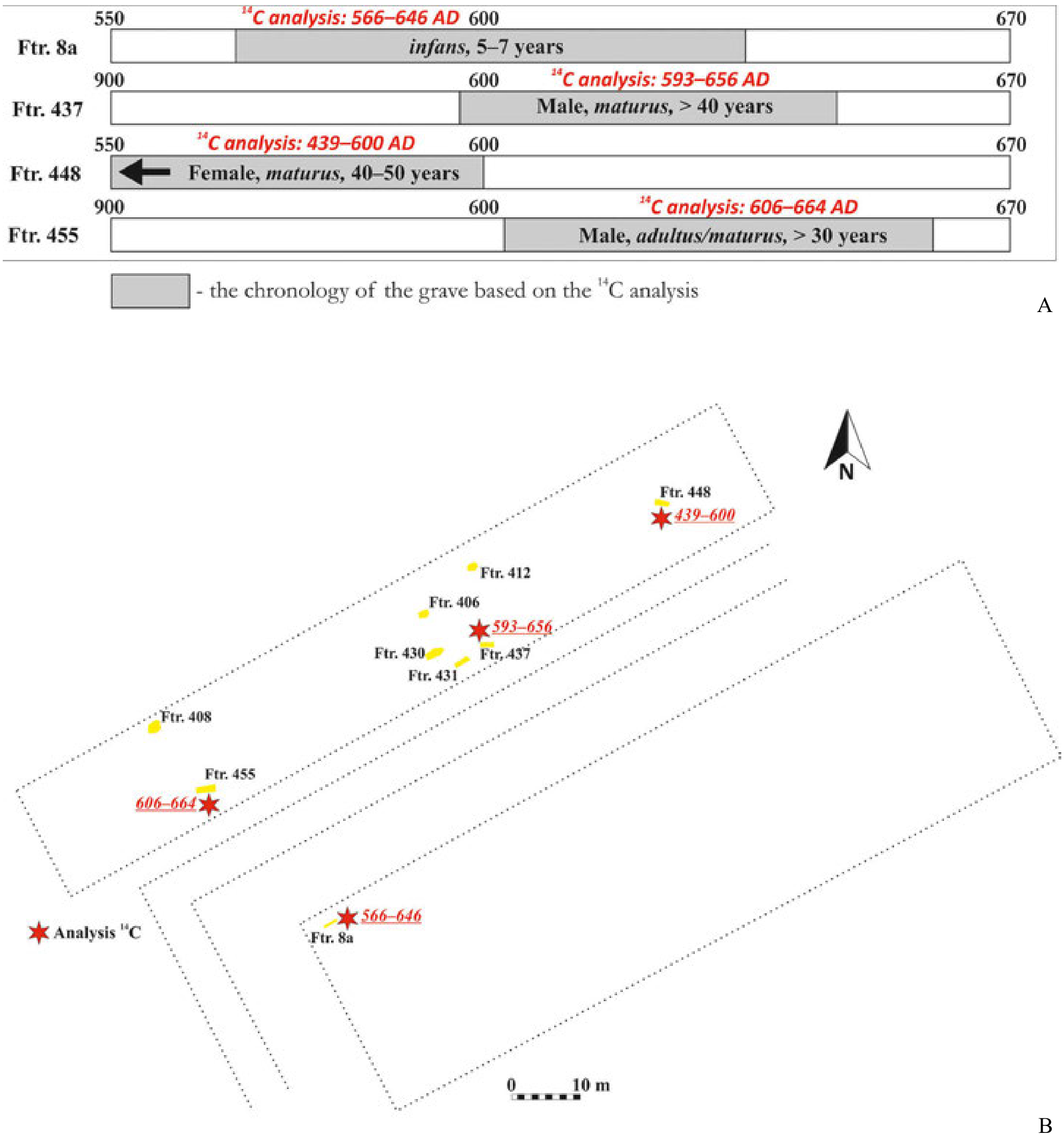


Fig. 10. A) The "individual dating" of the graves analysed through ^{14}C;
B) The positions of those graves within the inner funerary space

Abb. 10. A) Die „Einzeldatierung" der bis ^{14}C analysierten Gräber;
B) Die Positionen dieser Gräber innerhalb des inneren Grabraums

The dispersed character of positioning of the burials, the heterogeneity of the orientations of the graves, and the relatively large difference between the ^{14}C datings, encourages us to ask whether these graves were dug by the same micro communities or if they belonged to members of different communities who preferred these places to bury their deceased. The small number of graves leads us towards this type of hypothesis.

It is true that in the first part of the Avar Age, funerary sites in the Lower Mureș Valley are known to have a small number of graves, and they have been documented both in a small area (like Nădlac 1M, 9M), and, in other cases, in larger areas (like Pecica-Rovine/Căprăvanul Mic, Vălcani).

At the same time, they often formed a small part of a cemetery with a much larger number of graves, which

have not yet been entirely researched (like Nădlac-3M-N, Deszk G, Kiszombor site O, etc.).

On 1.0 ha only 2 graves have been unearthed from Pecica-Rovine/Căprăvanul Mic,[30] while not far away from the location of "Est/Smart Diesel", on a very large area, two groups of burials consisting of eight (*Site 15 – cluster of graves B*), and three graves (*Site 15 –cluster of graves A*) have been excavated.[31]

Similar situations, where the graves were dispersed over a large territory are known in the Lower Mureș Valley, and in other parts of the Carpathian Basin.

At Börcs-Nagydomb, in the north-west of the Carpathian Basin, on 3.5 ha, five graves at a distance of dozens of meters from one another were excavated.[32] In the case of Tolna-Mözs, four graves have been researched, also sparsely, at a significant distance from each other.[33] On the area of the Wienerberger Brick Industrial Corporation, Tiszavasvári-Kashalmi dülő, six Early Avarian burials came to light on 10.8 ha, situated several hundred metres from each other.[34] Other cases were recorded in Hódmezővásárhely-Koppáncs II, where, on a large area, only one burial has been identified,[35] in from Derecske-Kösely, where on a very large surface two graves have been excavated, at a distance of 7 metres from each other.[36] Archaeological rescue excavations conducted at Gyula site no. 511 resulted in the discovery of a single grave on a sizeable surface (circa 3.75 ha).[37] Other similar examples, when only one grave was excavated could be cited from Biharkeresztes-Lencséshát,[38] Békéssámson-Móricz Zs. u. 12,[39] Derecske-DNy határa, M35,[40] Szentes-Borbásföld,[41] Tiszavasvári-Eszenyi telek,[42] etc.

However, for a very similar situation we have data from a 10[th] century funerary place, in the case of the graves at the site of "Homokbánya" (Sand-pit) no. 5, in Szeged-Öthalom. There, as at the site of Pecica "Est/Smart Diesel", the graves were situated at a distance of dozens of meters from one another, and, much more importantly, the archaeogenetic analysis could confirm that these individuals were not related biologically. The ^{14}C and typochronological analyses revealed very clearly that between the digging of the graves 36, 124, 132, and 237 there were differences of decades. The funerary space at Szeged was most likely used by several different communities and, more importantly, in different periods![43]

All in all, from this point of view, we believe that we would not be too mistaken if we advance the hypothesis that certain nomadic lifestyles were maintained from the second half of the 6[th] century to the middle of the 7[th] century, which were adapted to the geomorphological realities of the Carpathian Basin, at least for a part of the communities (*pastoral nomadism*).[44] In this sense, the short distance (5–16 km), when compared to the average mid-range *nomadism* (20–70 km) in this period, could logically explain our archaeological observations.[45] This can be most likely explained by the presence of mobile, pastoral communities, inhabiting the middle and eastern part of the Carpathian Basin.

Similarly, indirect observations have been made by natural scientists: an eastward population movement, as a sign of a phenomenon of sedentary lifestyle is indicated by the eastward shift in the pollen distribution of cerealia in the 7[th] century.[46] However, the geographical distribution of burial sites in the Transtisa regions also leads us to such assumptions (see Fig. 8).

Additionally, the existence of some "central places" (core regions) can also explain the appearance of some cemeteries with a relatively large number of graves (Makó-Mikócsa halom, Deszk-sites G, T, Szegvár-Oromdülő, and maybe Debrecen-M35), among which are some with spectacular inventories and long-distance imports, such as those from Makó-Mikócsa halom, Deszk-site G or, further north, Szegvár-Oromdülő and Tiszavasvári-Kashalmi dűlő.[47]

---

30 Gáll, Mărginean 2021, 203–223.

31 Mărginean et al. 2022, Fig. 8.

32 Tomka 2005, 137–179.

33 Kiss 2019, 127–149.

34 Lőrinczy, Rácz 2014, 141, Figs. 2–4.

35 Herendi 2012, Fig. 1.

36 Deák, Szabó 2017, 64.

37 Rózsa, Vörös 2004, 35–41.

38 *"A sír körül kb. 10 méteres körzetben sem került elő újabb temetkezés, így az magányosnak tekinthető."* Mesterházy 1987, 222.

39 Lőrinczy 1998, 344–346, 5–6. kép; ADAM 2002, Vol. I: 54–55.

40 A kagán lovasa 2022.

41 Lőrinczy 1996, 177–189.

42 Gulyás, Lőrinczy 2018, 89–109.

43 In the case of Graves 36 and 124 an early dating could be feasible, maybe even in the 9[th] century, and Graves 150 and 287 (sheet metal bangle with twirled endings) could be dated only to the middle of the 10[th] century. Türk, Lőrinczy, Marcsik 2015, 44–45.

44 In this regard, see, for example, Pohl 2018, 198–220 and Curta 2021, 110–131.

45 Regarding nomadism, see: Khazanov 1994; Kradin 2016, 1–6.

46 Törőcsik, Sümegi 2019, 251, 254, Fig. 5.

47 Balogh 2016b, 109–120; Csallány 1939, 126–129, Taf. I/2, IV, VI, VIII/6-12; Lőrinczi, Somogyi 2018, 231–249.

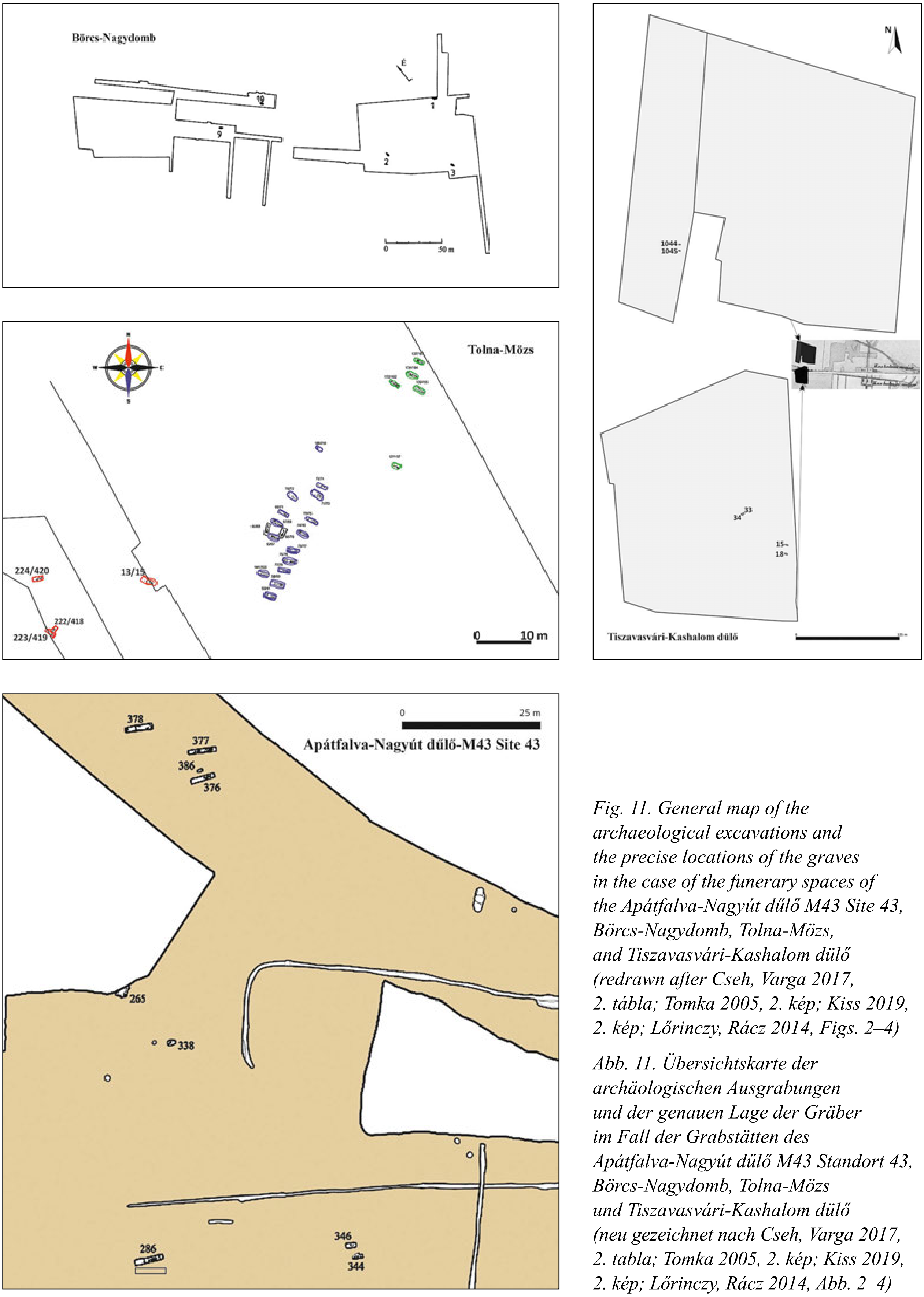


Fig. 11. General map of the archaeological excavations and the precise locations of the graves in the case of the funerary spaces of the Apátfalva-Nagyút dűlő M43 Site 43, Börcs-Nagydomb, Tolna-Mözs, and Tiszavasvári-Kashalom dülő (redrawn after Cseh, Varga 2017, 2. tábla; Tomka 2005, 2. kép; Kiss 2019, 2. kép; Lőrinczy, Rácz 2014, Figs. 2–4)

Abb. 11. Übersichtskarte der archäologischen Ausgrabungen und der genauen Lage der Gräber im Fall der Grabstätten des Apátfalva-Nagyút dűlő M43 Standort 43, Börcs-Nagydomb, Tolna-Mözs und Tiszavasvári-Kashalom dülő (neu gezeichnet nach Cseh, Varga 2017, 2. tabla; Tomka 2005, 2. kép; Kiss 2019, 2. kép; Lőrinczy, Rácz 2014, Abb. 2–4)

We believe that we will be able to obtain more pertinent answers only when we have more complete analyses, which could offer us a much more complex image of the lifestyle, relationships, kinships, and contacts between these communities. These aspects could only be elucidated through comparative ancient DNA, strontium isotope, and ^{14}C analyses performed during the same work process.

Acknowledgments

We would like to express our heartfelt thanks to Victor Sava for the carbon data processing, and the archaeological team: Peter Hügel (scientific coordinator), Florin Mărginean, Victor Sava, Luminița Szilagyi, Ágnes Székely, Zlatoe Țmor, Raluca D. Matei, Alexandru Berzovan (research team members – 2015) and Adrian Ursuțiu (scientific coordinator), Sorin Cociş, Victor Sava, Malvinka Urák (research team members – 2017).

Translated by: Alina Piticaru, Ana Maria Gruia

BIBLIOGRAPHY:

ADAM 2002– J. Szentpéteri (Hrsg), *Archäologische Denkmäler der Awarenzeit in Mitteleuropa,* Vol. I–II, Varia Archaeologica Hungarica 13, Budapest 2002.

Asmann 2011 – J. Asmann, *Cultural Memory and Early Civilization. Writing, Remembrance, and Political Imagination*, Cambridge 2011.

Balogh 2014 – Cs. Balogh, Az avar kori gúlacsüngős fülbevalók, *Kuny Domokos Múzeum Közleményei* 20, 2014, 91–158.

Balogh 2016a – Cs. Balogh, *Régészeti adatok a Duna–Tisza közi avarok történetéhez*, Studia ad Archaeologiam Pazmaniensia 6, Budapest 2016.

Balogh 2016b – Cs. Balogh, Karpat Havzasi'nda bir Avar yay Ustasinin Mezar Kalintilari Eski Türklerde Bileşik (Kompozit) yay Yapimina ?lişkin Arkeolojik Bulgular, *Art-Sanat Journal/Art-Sanat Dergisi* 6, 2016, 109–120.

Benedek, Marcsik 2017 – A. Benedek, A. Marcsik, Kora avar kori temetőrészlet Kövegyről. Új temetkezési szokások a Tisza–Körös–Maros mentén a kora avar korból, in: *Úton a kulturák földjén. Az M43-as autópálya-országhatár közötti szakasz régészeti feltárásai és a hozzá kapcsolódó vizsgálatok*, (szerk.) Sz. T. Gábor, P. Czukor, Szeged 2017, 369–442.

Brather 2008 – S. Brather, Kleidung, Bestattung, Identität: Die Präsentation sozialer Rollen im frühen Mittelalter, in: *Zwischen Spätantike und Frühmittelalter*: Archäologie des 4. bis 7. Jahrhunderts im Westen, (hrsg.) S. Brather, in: Reallexikon der Germanischen Altertumskunde – Ergänzungsbände 57, (hrsg.) H. Beck, D. Geuenich, H. Steuer, Berlin – New York 2008, 237–274.

Bugarski 2008 – I. Bugarski, The Geomorphological Matrix as a Starting Point for Determining the Position of Avar-time Settlements in Pannonia – the Example of the Bačka Region, *Archäologisches Korrespondenzblatt* 28/3, 2008, 437–455.

Cociş *et al.* 2016 – S. Cociş, E. Gáll, M. Urák, A. Ursuțiu, The Periphery of the Centre? The Late Avar cemetery part from Nădlac (Germ.: Nadlak; Hung.: Nagylak; Slov.: Nadlak), *Archaeologia Bulgarica* 20/1, 2016, 1–96.

Csallány 1939 – D. Csallány, Kora-avarkori sírleletek, *Folia Archaeologica* 1–2, 1939, 121–180.

Csallány 1940 – D. Csallány, Kora-avarkori edények Magyarországon, *Dolgozatok a Szegedi Tudományegyetem Régiségtudományi Intézetéből* 16, 1940, 118–144.

Csallány 1943 – D. Csallány, A Deszk D számú temető avar sírjai, *Archaelogiai Értesítő* 56, 1943, 160–173.

Csallány 1961 – D. Csallány, *Archäologische Denkmäler der Gepiden im Mitteldonaubecken (454–658 u . Z.)*, Archaeologia Hungarica 38, Budapest 1961.

Csallány 1968 – D. Csallány, Neue Ergebnisse der awarenzeitlichen Forschungen in Ostungarn, *Študijné zvesti* 16, 1968, 59–70.

Csallány 1969–1971 – D. Csallány, Avar kori páncélok a Kárpát-medencében, *A nyíregyházi Jósa András Múzeum Évkönyve* 12–14, 1969–1971, 7–44.

Cseh, Varga 2017 – G. Cseh, S. Varga, Avar kori temetkezések Apátfalva-Nagyút-dűlőn (M43 43. lh.), in: *Út(on) a kultúrák földjén. Az M43-as autópálya Szeged-országhatár közötti szakasz régészeti feltárásai és a hozzá kapcsolódó vizsgálatok*, Szeged 2017, 443–477.

Daim 2003 – F. Daim, Vom Umgang mit toten Awaren. Bestattungsgebräuche im historischen Kontext, in: *Erinnerungskultur im Bestattungsritual*, (hrsg.) J. Jarnut, M. Wemhof, Archäologisch-historisches Forum, München 2003, 41–60.

Dömötör 1901 – L. Dömötör, Újabb lemezsajtoló présminták Fönlakról*, Archaelogiai Értesítő* 21, 1901, 62–66.

Dörner 1960 – E. Dörner, Mormînt din epocă avară la Sînpetru German, *Studii şi Cercetări de Istorie Veche* 11/2, 1960, 423–433.

Dörner 1970 – E. Dörner, Cercetări si săpături arheologice în judetul Arad, *Materiale şi Cercetări Arheologice* 9, 1970, 445–465.

Effros 2003 – B. Effros, *Merovingian Mortuary Archaeology and the Making of the Early Middle Ages*, Berkeley–Los Angeles–London 2003.

Gáll 2017 – E. Gáll, *At the Periphery of the Avar Core Region: 6th–8th Century Burial Sites near Nădlac (The Pecica–Nădlac Motorway Rescue Excavations)*, Patrimonium Archaeologicum Transylvanicum 13, Paris–Budapest 2017.

Gáll, Mărginean, Peter 2019 – E. Gáll, F. Mărginean, S. Peter, On the "Mobility" of Symbols. The Sign of the Cross on the Pot Found in Grave cx. 20a from Pecica-Duvenbeck, *Hungarian Archaeology, online /Archaeolingua* 8, 2019, 28–35.

Gáll, Mărginean 2020 – E. Gáll, F. Mărginean, Archaeological Discoveries Linked to the "First Generation" of the Avar Conquerors Living East of the Tisa During the 6th–7th Centuries. The Grave Cluster in Nădlac-Site 1M, *Sprawozdania Archeologiczne* 72, 2020, 373–407. DOI: 10.23858/Sa/72.2020.2.1864.

Gáll, Mărginean 2021 – E. Gáll, F. Mărginean, The Graves from Pecica-Rovine/Căprăvanul Mic and Distribution Networks of Amber and Personal Adornments in the 6th and 7th Centuries, *Vjesnik Arheološkog muzeja u Zagrebu / Journal of the Archaeological Museum in Zagre*b 3. serija, 54, 2021, 203–223.

Gulyás 2017 – B. Gulyás, Újabb adatok a kora avar kori Tiszántúl kelet-európai kapcsolataihoz, in: *Hadak Útján XXIV. A népvándorláskor fiatal kutatóinak XXIV. konferenciája Esztergom, 2014. november 4–6/ Conference of Young Scholars on the Migration Period November 4–6, 2014*, (szerk./ed.) A. Türk, Esztergom. Studia ad Archaeologiam Pazmaniensia/Magyar Tudományos Akadémia Bölcsészettudományi Kutatóközpont Magyar Őstörténeti Témacsoport Kiadványok 3/1, Budapest-Esztergom 2015, 499–512.

Hampel 1900 – J. Hampel, A fönlaki koraközepkori préselőmintákról, *Archaelogiai Értesítő* 20, 1900, 117–123.

Hampel 1905 – J. Hampel, *Alterthümer des frühen Mittelalters in Ungarn,* Vol. I–III. Braunschweig 1905.

Kalmár 1943 – J. Kalmár, Népvándorláskori akasztóhorgok és veretek, *Archaelogiai Értesítő* 56, 1943, 149–159.

Khazanov 1994 – A. M. Khazanov, *Nomads and the Outside World*, Madison 1994.

Kisléghi Nagy 1911 – Gy. Kisléghi Nagy, Torontál megye őstörténete, in: *Torontál vármegye. Magyarország vármegyéi*, (szerk.) S. Borovszky, Budapest 1911, 304–328.

Kisléghi Nagy 2010 – Gy. Kisléghi Nagy, *Archaelógiai Napló*, Szeged–Temesvár 2010.

Kiss 2019 – Cs. K. Kiss, Avar temető Tolna-Mözs határában, *Communicationes Archaeologicae Hungariae* 2019, 127–149.

Kovács 1944 – L. K. Kovács, *A kolozsvári hóstátiak temetkezése,* Kolozsvár 1944.

Kovrig 1963 – I. Kovrig, *Das awarenzeitliche Gräberfeld von Alattyán,* Archaeologia Hungarica 40, Budapest 1963.

Kradin 2016 – N. Kradin, Nomads, in: *The Encyclopedia of Empire*, (ed.) J. M. MacKenzie, 2016, 1–6.

Lőrinczy 1992 – G. Lőrinczy, Megjegyzések a kora avar kori temetkezési szokásokhoz. A tájolás, *A nyíregyházi Jósa András Múzeum Évkönyve* 30–32/1987–1989, 1992, 155–171.

Lőrinczy 1994 – G. Lőrinczy, *Megjegyzések a kora avarkori temetkezési szokásokhoz (*A *fülkesíros temetkezés*), in: *A kőkortól a középkorig. Tanulmányok Trogmayer Ottó 60. születésnapjára*, (szerk.) G. Lőrinczy, Szeged 1994, 311–335.

Lőrinczy 1998 – G. Lőrinczy, Kelet-európai steppei népesség a 6–7. századi Kárpát-medencében. Régészeti adatok a Tiszántúl kora avar kori betelepüléséhez, *A Móra Ferenc Múzeum Évkönyve – Studia Archaelogica* 4, 1998, 343–372.

Lőrinczy 2016 – G. Lőrinczy, A tiszántúli VI–VII. századi sírok és temetők sajátosságai. A kora avar kori népesség továbbélése a VII–IX. században a Körös–Tisza–Maros-közén, *A nyíregyházi Jósa András Múzeum Évkönyve* 58, 2016, 155–176.

Lőrinczy 2017 – G. Lőrinczy, Frühawarenzeitliche bestattungssitten im gebiet der grossen ungarischen tiefebene östlich der theiss. Archäologische angaben und bemerkungen zur geschichte der region im 6. und 7. Jahrhundert, *Acta Archaeologica Academiae Scientiarum Hungaricae* 68, 2017, 137–170.

Lőrinczy, Somogyi 2018 – G. Lőrinczy, P. Somogyi, Das Grab 33 des frühawarenzeitlichen Gräberfeldes von Szegvár-Oromdűlő (Ungarn). Archäologische Angaben zur Geschichte der Großen Ungarischen Tiefebene östlich der Theiß im 6.und 7. Jahrhundert, in: *Lebenswelten zwischen Archäologie und Geschichte – Festschrift für Falko Daim zu seinem 65. Geburtstag*, (hrsg.) J. Drauschke, E. Kislinger, K. Kühtreiber, Th. Kühtreiber, G. Scharrer-Liška, T. Vida, Sonderdruck Monographien des RGZM 150, Mainz 2018, 231–249.

Luca 1993 – S. A. Luca, Observaţii privind faza clasică a culturii Bodrogkerestúr în România. Aşezarea de la Pecica–Forgaci (judeţul Arad), *Analele Banatului-Serie Nouă* 2, 1993, 49–84.

Mărginean 2017 – F. Mărginean, O aşezare din perioada avară târzie şi urme de locuire din vremea arpadienilor la Mureşul de Jos. Descoperirile arheologice de la Pecica "Est/ Smart Diesel", jud. Arad, in: *Locuirea medievală timpurie din Transilvania și vecinătăți*, (eds.) F. Mărginean, I. Stanciu, D. Băcueț-Crișan, Orbis Medievalis I, Cluj–Napoca 2017, 141–184.

Mărginean *et al.* 2022 – F. Mărginean, M. H. K. Hőgyes, S. Peter, E. Gáll, "The outskirts of the Khagans". An overview of the Avar Age's burial sites near Pecica, in: *Avari i Slaveni dvije strane pojasnog jezičca – Avari na sjeveru i jugu kaganata / Two Sides of a Belt Strap End: Avars on the North and the South of the Khaganate*, (eds.) A. Rapan Papeša, A. Dugonjić, Zagreb 2022, 240–255.

Mărginean, Băcueț 2015 – F. Mărginean, D. Băcueț, Archaeological discoveries in the dark millennium at Felnac – Complexul Zootehnic (Arad county), *Ziridava Studia Archaeologica* 29, 2015, 215–226.

Medeleţ 1998 – F. Medeleţ, O descoperire de factură avară la Sânnicolau Mare (jud. Timiş), *Analele Banatului–Serie Nouă* 6, 1998, 307–316.

Móra 1932 – F. Móra, Néprajzi vonatkozások szegedvidéki népvandorláskori és korai magyar leletekben, *Ethnográphia* 43, 1932, 54–68.

Parker Pearson 2000 – M. Parker Pearson, *The archaeology of death and burial,* Texas A&M University Anthropology Series 3, Texas 2000.

Pásztor 2001 – A. Pásztor, A Szekszárd-Bogyiszló úti avar kori temető gyöngyleletei, *A Wosinsky Mór Múzeum Évkönyve* 23, 2001, 115–160.

Pásztor 2008 – A. Pásztor, Ergebnisse der typochronologischen Untersuchung awarenzeitlicher Perlenfunde in Ungarn

– Perlentracht in der Früh- und Mittelawarenzeit, *Antaeus* 29–30, 2008, 307–324.

Pohl 2018 – W. Pohl, *The Avars: A Steppe Empire in Central Europe, 567–822,* Ithaca – London 2018.

Posea 1997 – G. Posea, *Câmpia de vest a României (câmpia Banato-Crişană)*, Bucureşti 1997.

Rusu 2007 – L. Rusu, *Organizarea spaţiului geografic în Banat*, Timişoara 2007.

Szeverényi 2019 – V. Szeverényi, 44. Csanádpalota, Juhász T. tanya (M43 autópálya 60. lelőhely) (KÖH 52780), in: *Régészeti kutatások Magyarországon 2013 / Archaeological Investigations in Hungary 2013*, (szerk./eds.) J. Kvassay, A. Kreiter, Budapest 2019, 31–33.

Tomka 1977–1978 – P. Tomka, Adatok a Kisalföld avar kori népességének temetkezési szokásaihoz III. Koporsóhasználat a tápi temetőben, *Arrabona* 19–20, 1977–1978, 17–108.

Tomka 2005 – P. Tomka, Korai avar sírok Börcs Nagydombon (Győr-Moson-Sopron megye), *Archaelogiai Értesítő* 130, 2005, 137–179.

Türk, Lőrinczy, Marcsik 2015 – A. Türk, G. Lőrinczy, A. Marcsik, *Régészeti és természettudományi adatok a Marostorkolat nyugati oldalának 10. századi történetéhez*, Studia ad Archaeologiam Pazmaniensia 4, Budapest 2015.

Vida 1998 – T. Vida, *Die awarenzeitliche Keramik I*, Varia Archaeologica Hungarica 8, Berlin–Budapest 1998.

Vida 2016 – T. Vida, 'They Asked to Be Settled in Pannonia…': A Study on Integration and Acculturation – the Case of the Avars.", in: *Zwischen Byzanz und der Steppe. Archäologische und historische Studien. Festschrift für Csanád Bálint zum 70. Geburtstag / Between Byzantium and the Steppe. Archaeological and Historical Studies in Honour of Csanád Bálint on the Occasion of His 70th Birthday*, (eds.) Á. Bollók, G. Csiky, T. Vida and A. Miháczi-Pálfi, Zs. Masek, Budapest 2016, 251–270.

Zusammenfassung: FLORIN MĂRGINEAN, Arad Museumskomplex, Arad
ERWIN GÁLL, Rumänische Akademie, „Vasile Pârvan" Institut für Archäologie, Bukarest

„*DIE AUSSENBEZIRKE DES KHAGAN*". DIE ERSTEN „AVAR"-EROBERER IM UNTEREN MUREŞ IM LICHT DER GRÄBER VON PECICA „EST/SMART DIESEL": ARCHÄOLOGISCHE UND ^{14}C-ANALYSEN

Schlüsselwörter. – Grabraum, Gräber, Grabbeigaben, Opfergaben, Wandergemeinschaften, frühe Awarenzeit

Die archäologische Flächengrabung in der Nähe von Pecica hat das ausgraben der neun Gräber mit sehr schlechten Grabbeigaben ergeben, die auf der Grundlage der Aspekte des Bestattungsrituals und der ^{14}C-Analysen in der Zeit zwischen dem zweiten Teil des 6. Jahrhunderts und dem ersten Teil des 7. Jahrhunderts datiert werden könnten. Unter Berücksichtigung der Tatsache, dass diese Gräber auf einem sehr großen Gebiet (ca. 1,5 ha), in einer Entfernung von Dutzenden von Metern voneinander verstreut wurden, ohne einen organisierten Charakter des Grabplatzes (wie andere Friedhöfe) mit einer Heterogenität von Orientierungen, wir nehmen an, dass diese Individuen nicht biologisch verwandt waren, keine Gemeinschaft bildeten, und zu verschiedenen Zeiten von verschiedenen mobilen Gemeinschaften begraben wurden (pastoraler Nomadismus). Gleichzeitig wurde auf der Grundlage der ^{14}C-Analyse sehr deutlich, dass einige von ihnen, wie ein Individuum aus dem Grabmerkmal 448, Teil der Gruppe jener Awaren waren, die die Regionen des Karpatenbeckens in und nach dem Jahr 568 eroberten.

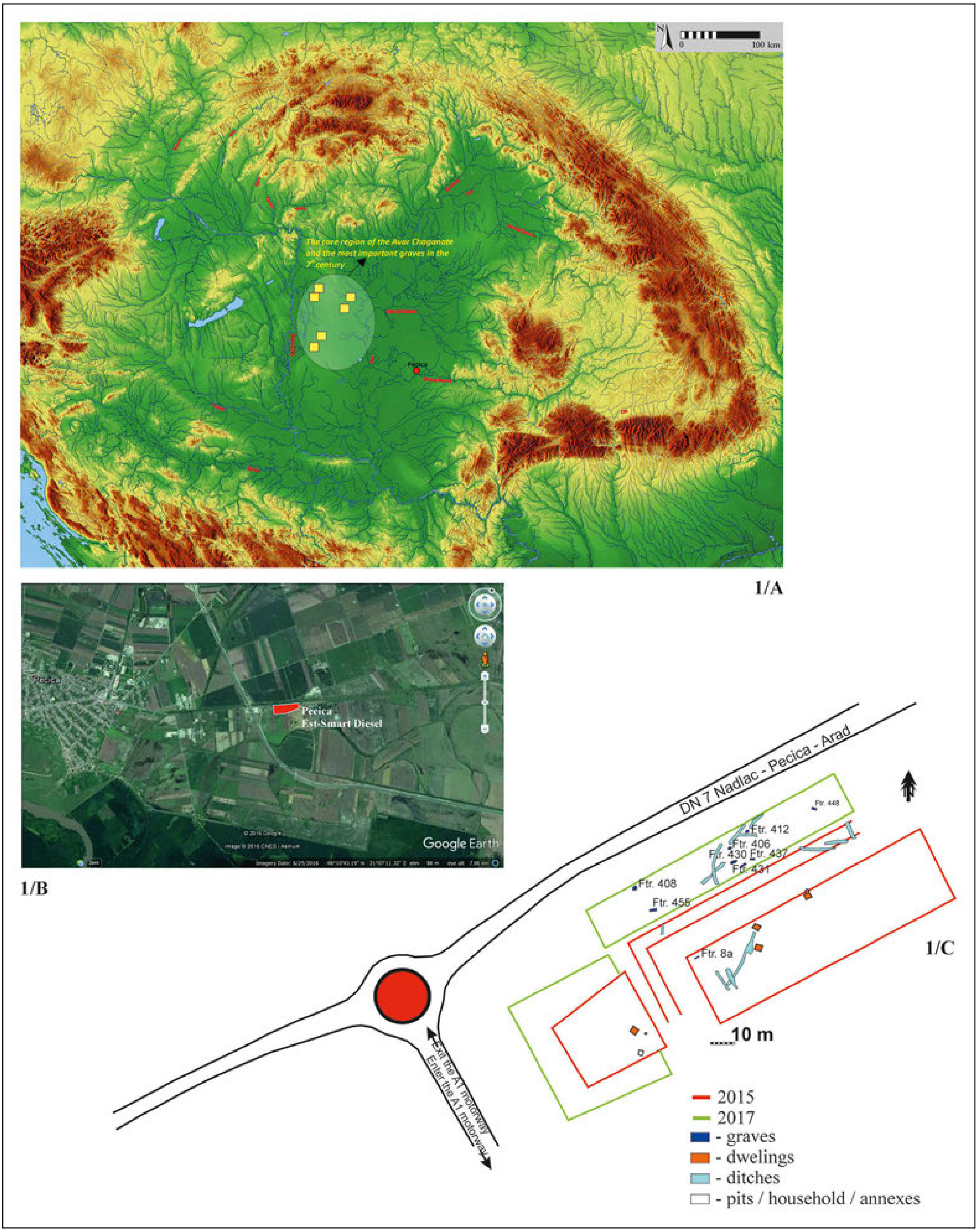


Plate I – A) Geographic location of the site in the Carpathian Basin; B) Location of the archaeological sites from east of Pecica: Pecica "Est/Smart Diesel"; C) Ground plan of the discoveries dated to the Avar Period

Tafel I – A) Geografische Lage des Standorts im Karpatenbecken; B) Lage der archäologischen Stätten östlich von Pecica: Pecica „Est/Smart Diesel"; C) Grundriss der Funde aus der Awarenzeit

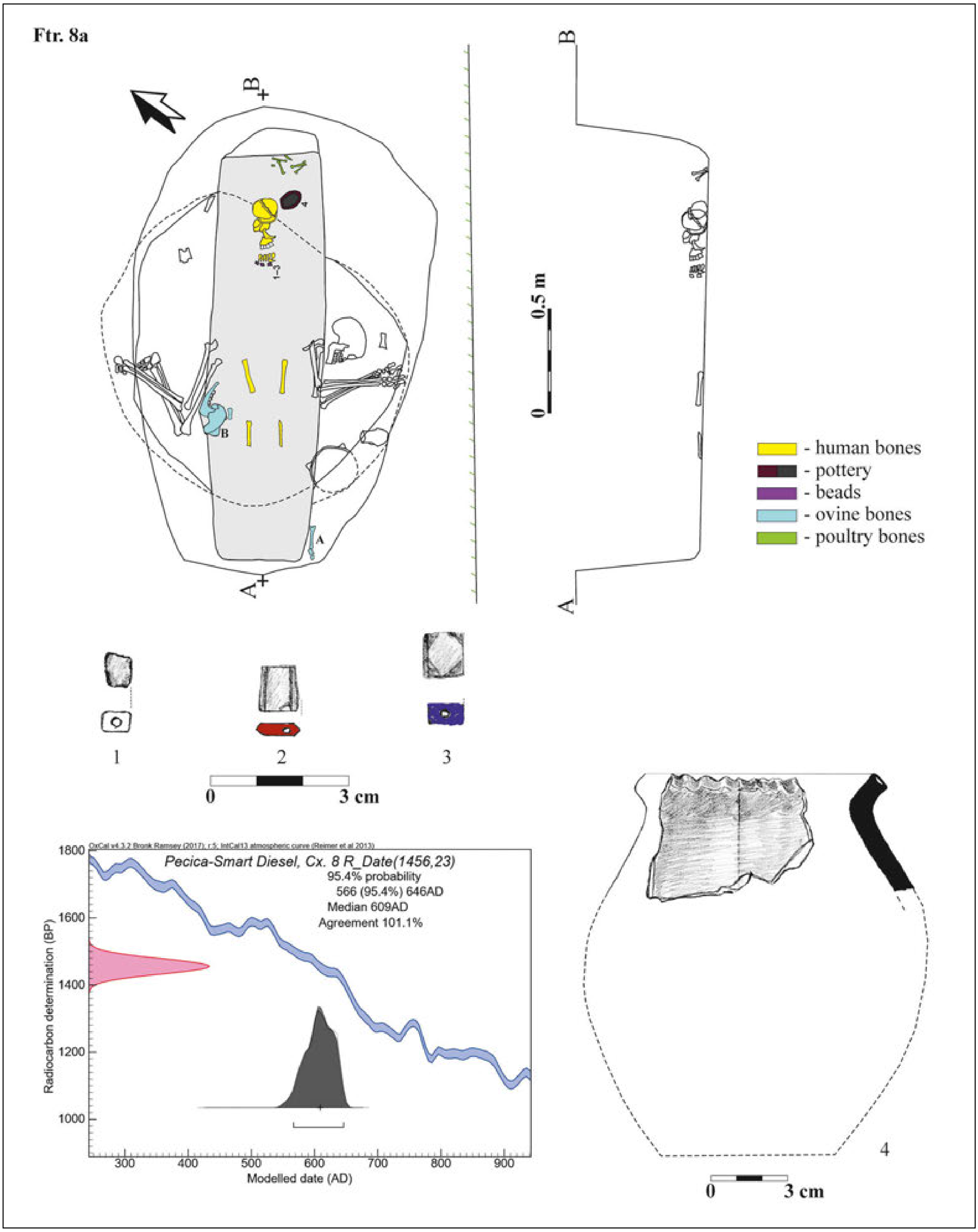


Plate II – Feature 8a. Grave: 1–3) Beads; 4) Pot fragment

Tafel II – Befund 8a. Grab: 1–3) Perlen; 4) Topffragment

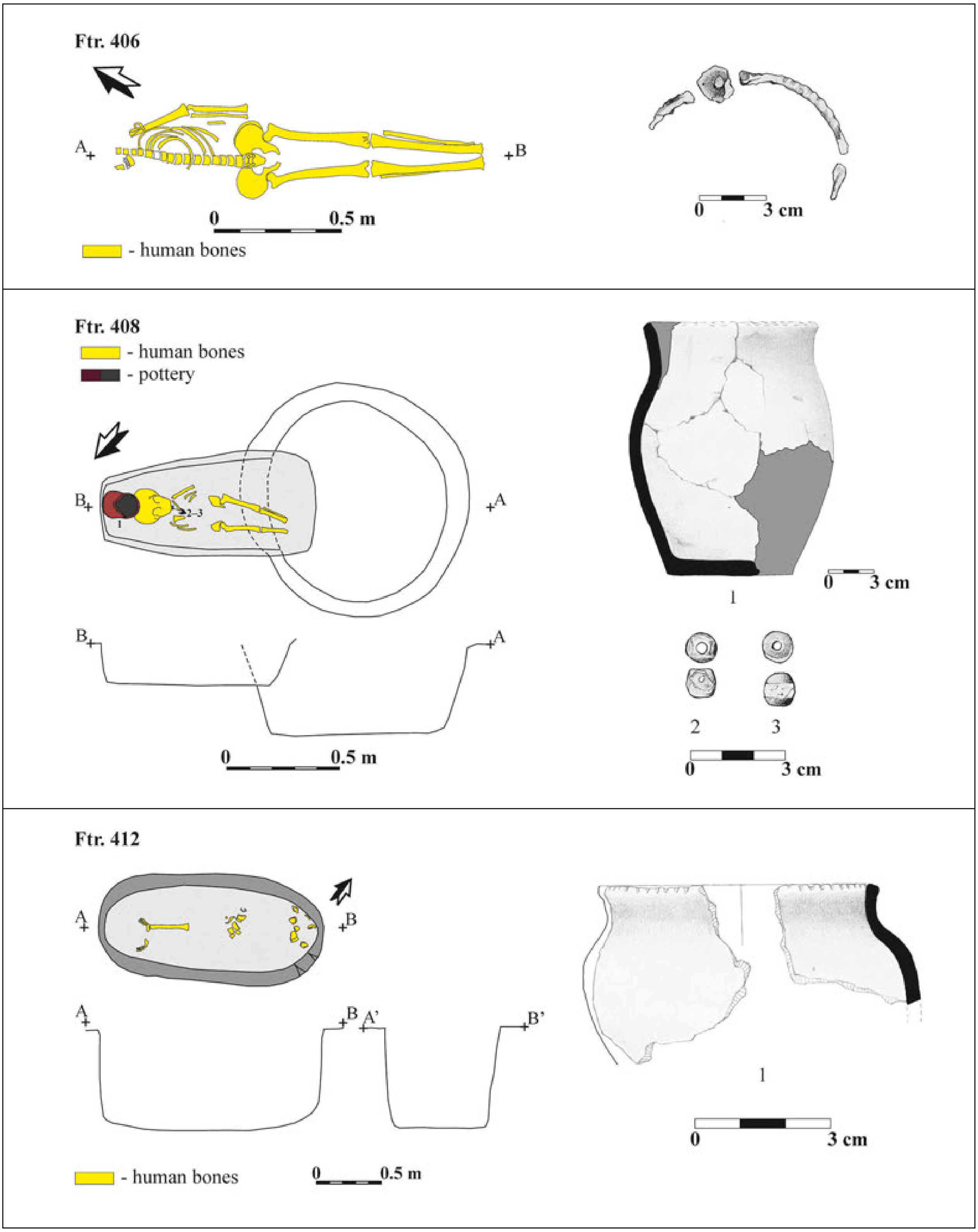


Plate III – Feature 406. Grave: 1) Iron ring; Feature 408. Grave: 1) Pottery; 2–3) Beads; Feature 412. Grave: 1) Pottery

Tafel III – Befund 406. Grab: 1) Ring aus Eisen; Befund 408. Grab: 1) Töpferwaren; 2–3) Perlen; Befund 412. Grab: 1) Töpferei

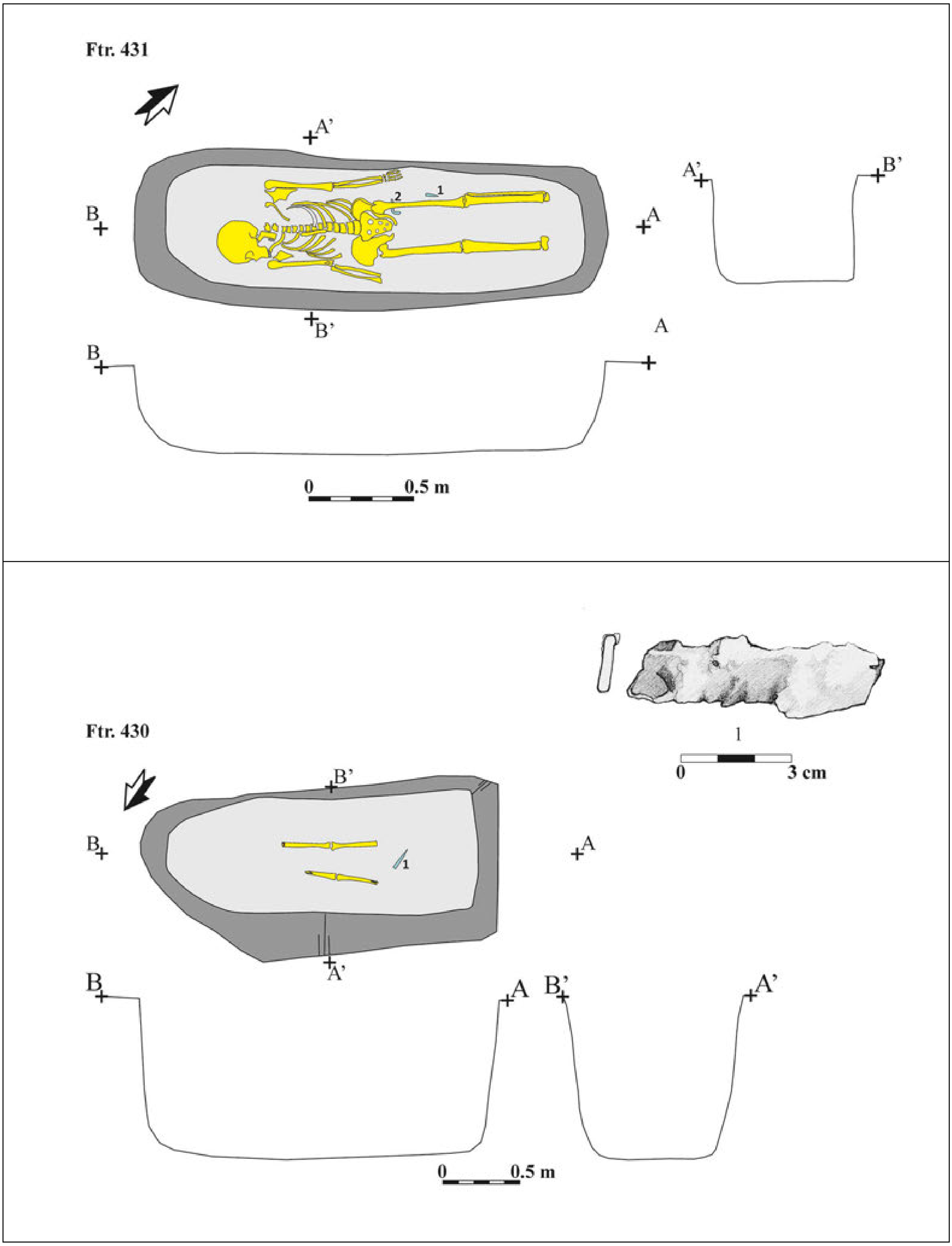


Plate IV – Feature 430. Grave; Feature 431. Grave: 1) Iron knife (fragmented)

Tafel IV – Befund 430. Grab; Befund 431. Grab: 1) Eisenmesser (zersplittert)

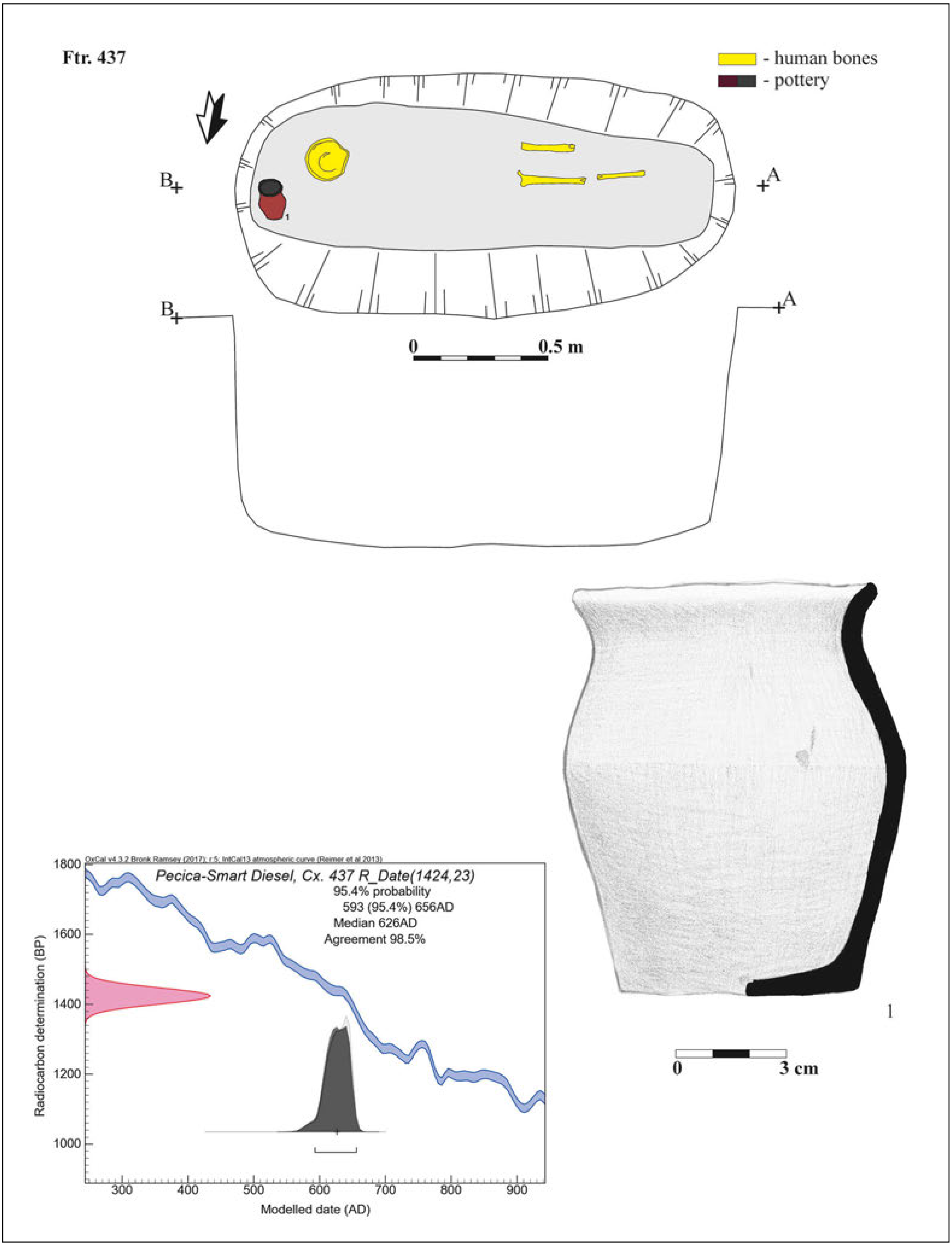


Plate V – Feature 437. Grave: 1) Pottery

Tafel V – Befund 437. Grab: 1) Topf

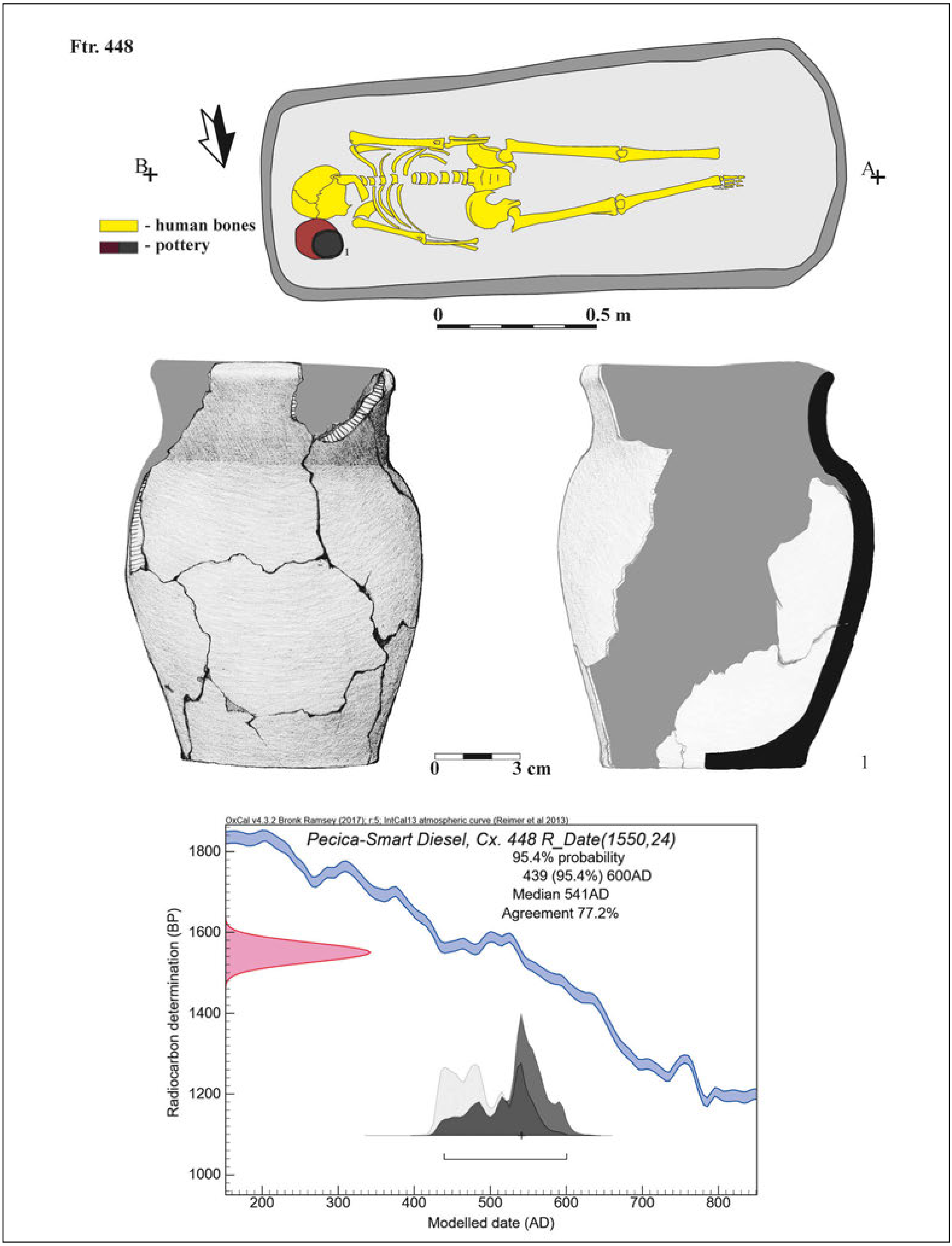


Plate VI – Feature 448. Grave: 1) Pottery

Tafel VI – Befund 448. Grab: 1) Topf

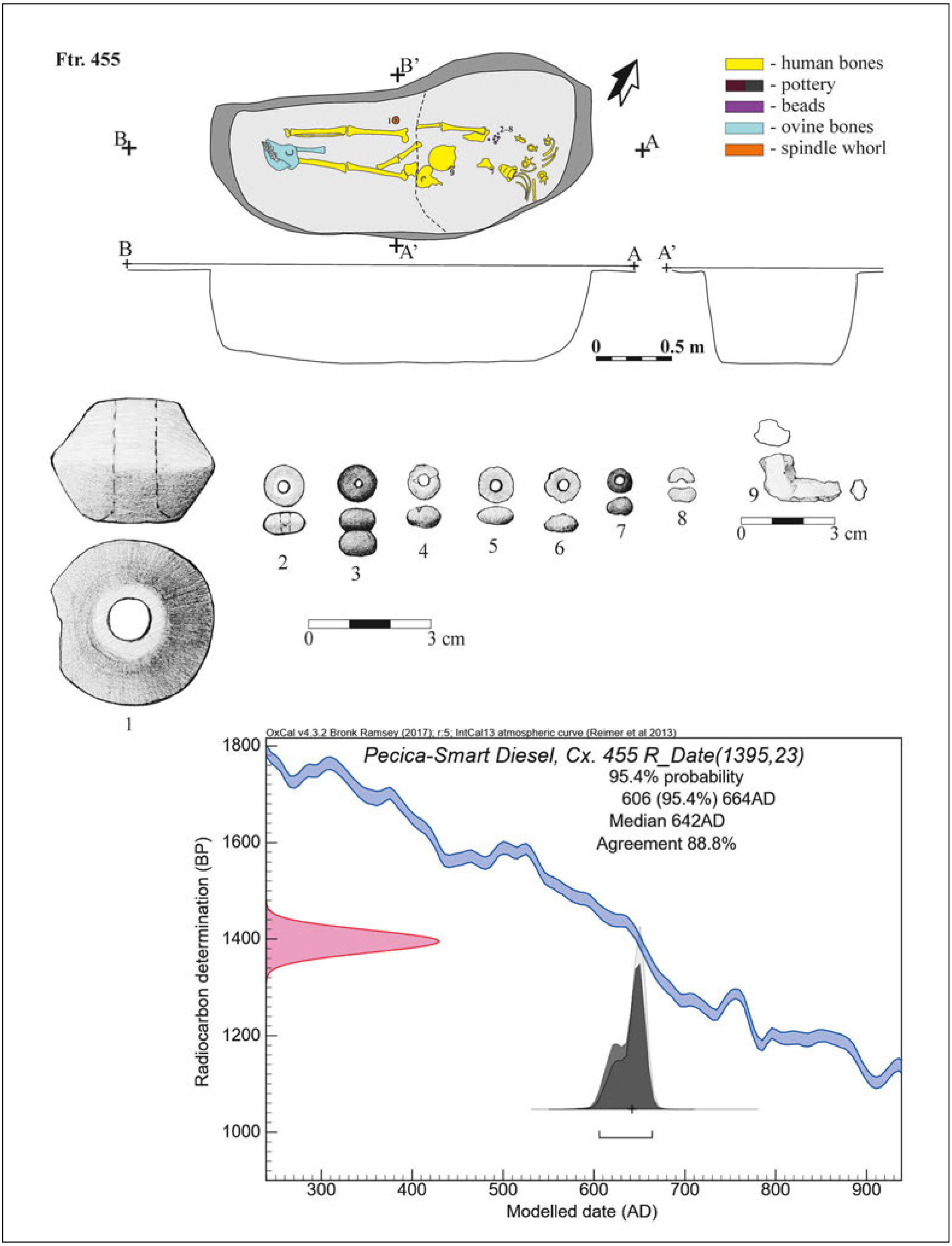


Plate VII – Feature 455. Grave: 1) Spindle whorl; 2–8) Beads; 9) Fragment of an iron object

Tafel VII – Befund 455. Grab: 1) Spinnwirtel; 2–8) Perlen; 9) Fragment eines Eisengegenstandes

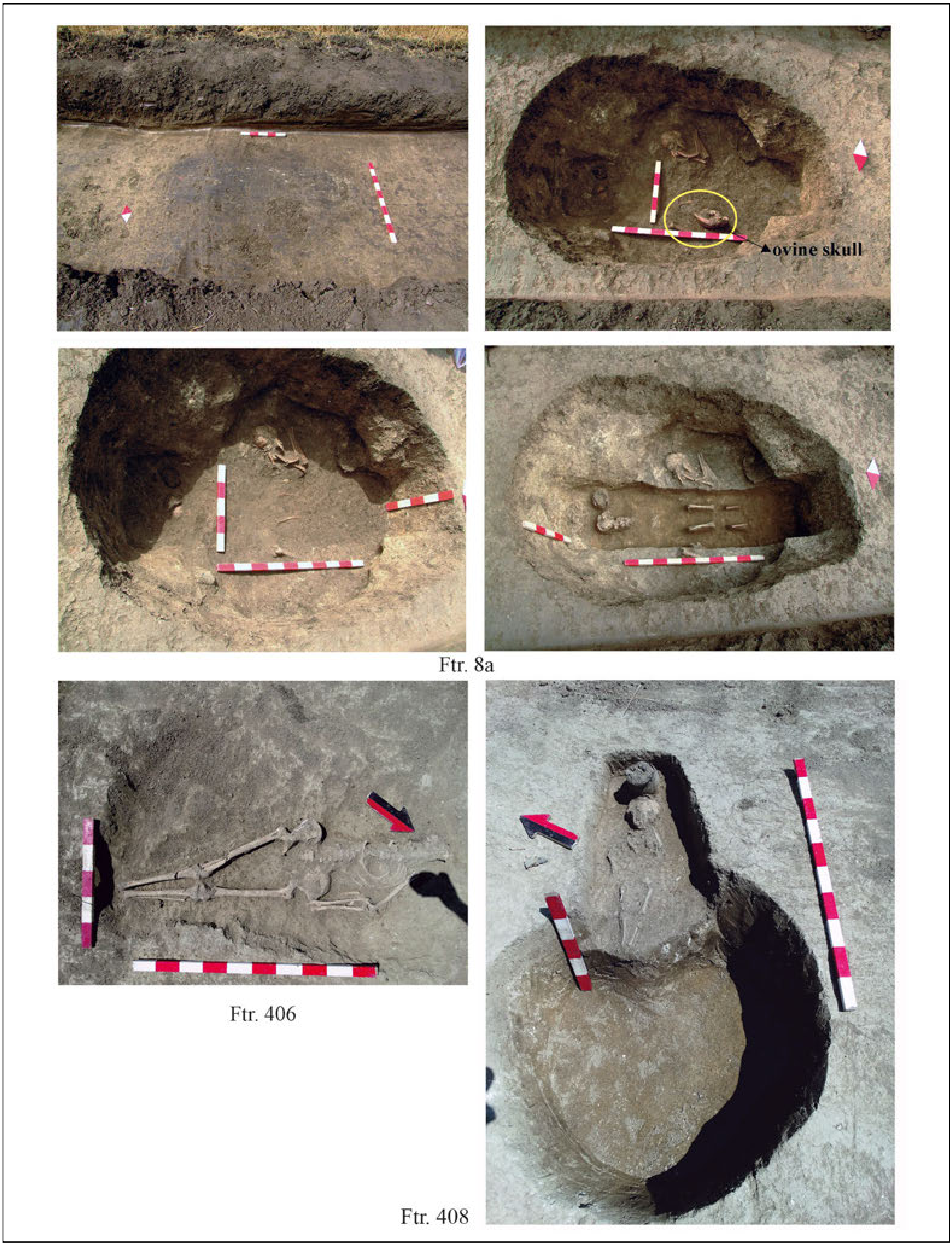


Plate VIII – Feature 8a; Feature 406; Feature 408

Tafel VIII – Befund 8a; Befund 406; Befund 408



Plate IX – Feature 412; Feature 430; Feature 431

Tafel IX – Befund 412; Befund 430; Befund 431

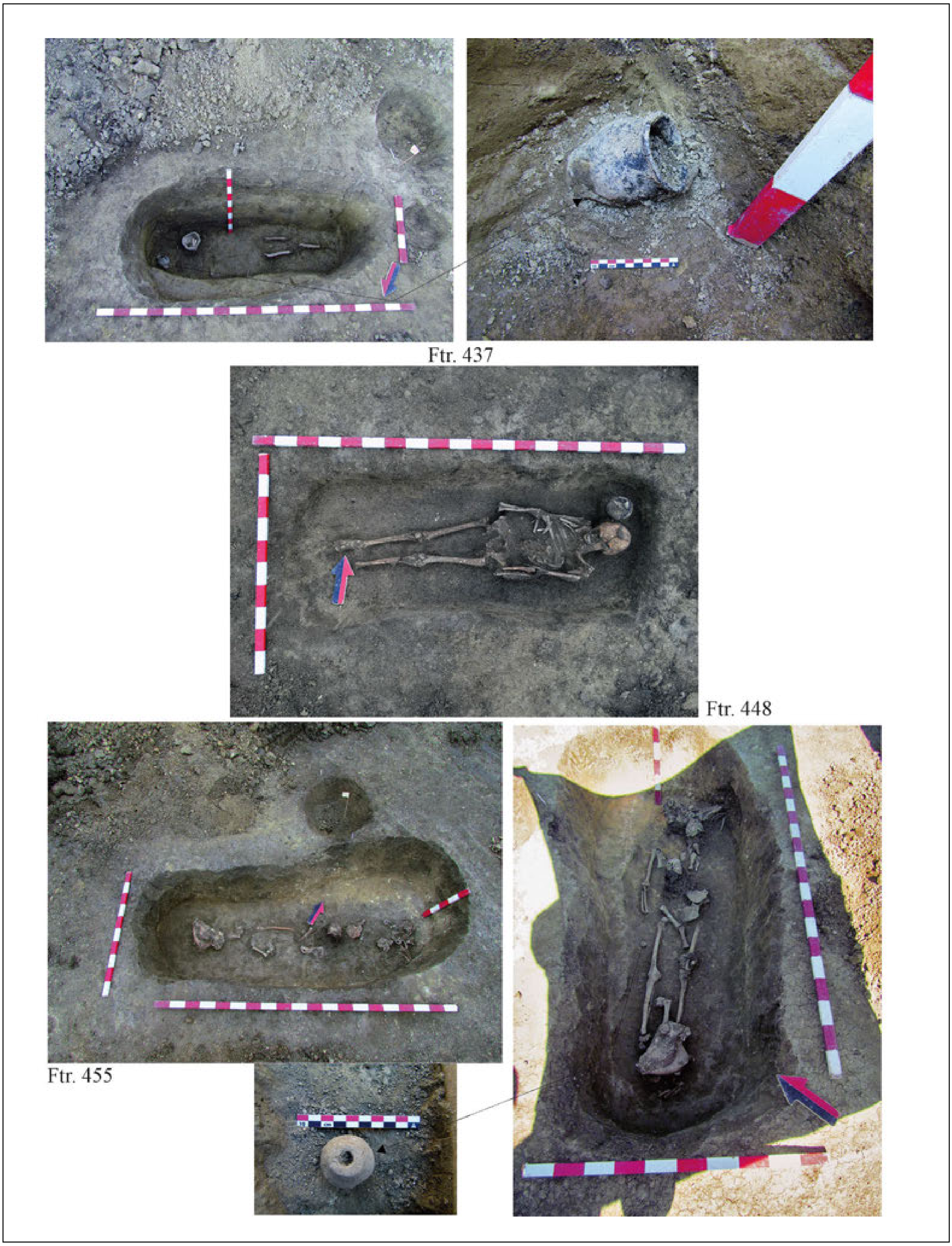


Plate X – Feature 437; Feature 448; Feature 455

Tafel X – Befund 437; Befund 448; Befund 455

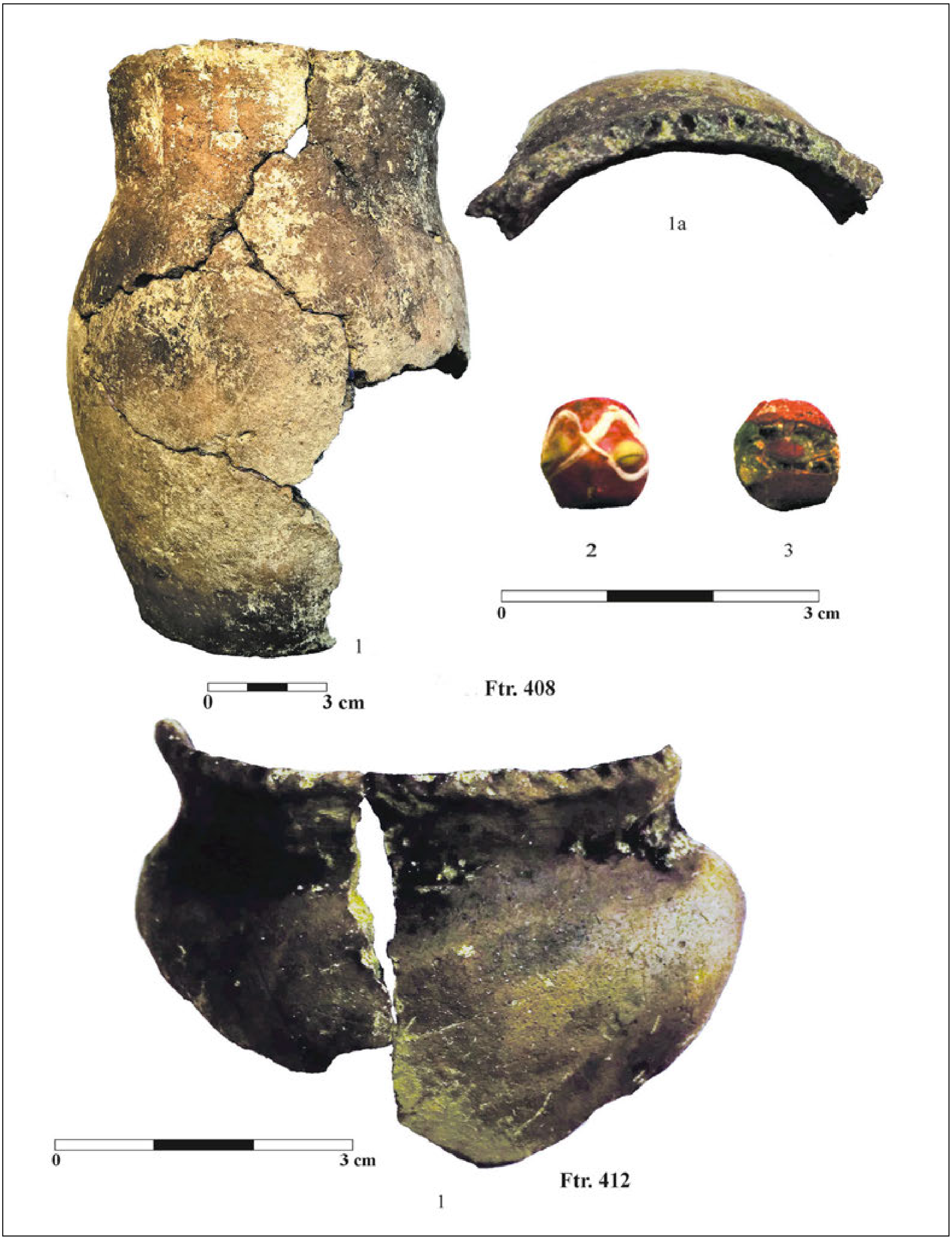


Plate XI – Feature 408. Grave: 1) Pot; 2–3) Beads; Feature 412. Grave: 1) Pot fragments

Tafel XI – Befund 408. Grab: 1) Topf; 2–3) Perlen; Befund 412. Grab: 1) Topffragmente

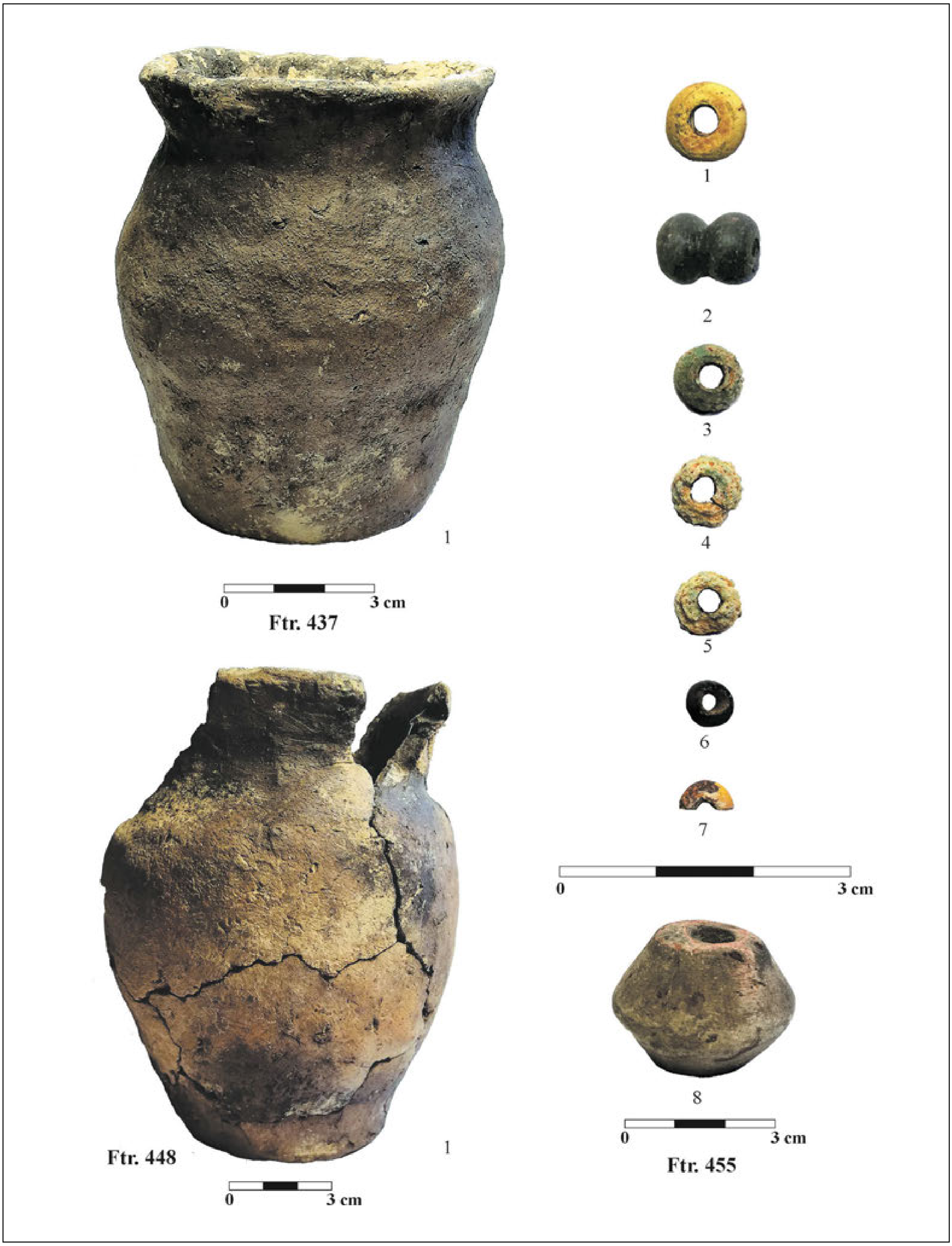


Plate XII – Feature 437. Grave: 1) Pot; Feature 448. Grave: 1) Pot; Feature 455. Grave: 1–7) Beads; 8) Spindle whorl

Tafel XII – Befund 437. Grab: 1) Topf; Befund 448. Grab: 1) Topf; Befund 455. Grab: 1–7) Perlen; 8) Spinnwirtel

UDC: 904:666.64(449.45)"14/16"
902.2(449.45)"2015/..."
https://doi.org/10.2298/STA2272301P
Original research article

KEWIN PECHE-QUILICHINI, Musée de l'Alta Rocca – Levie, Collectivité de Corse,
« Archéologie des Sociétés Méditerranéennes » UMR 5140 Université Paul-Valéry, LabEx ARCHIMEDE, MCC-CNRS, Montpellier (France)

LES VAISSELLES PRODUITES DANS LE NORD DE LA CORSE VERS 1600 APR. J.-C. : L'EXEMPLE DE LA TOUR LITTORALE DE L'OSARI (BELGODÈRE, HAUTE-CORSE)

e-mail: baiucheddu@gmx.fr

Résumé – L'article consiste en l'étude des vaisselles modelées produites localement découvertes durant l'étude de la tour littorale de L'Osari, fouillée en 2015 sous la direction de L. Vidal, avec la collaboration de P. Ferreira (Inrap). Ce monument dédié à la surveillance de l'espace maritime se trouve sur une côte rocheuse du nord de la Corse et appartient à un réseau d'édifices (une centaine) du même type installés sur le littoral de l'ensemble de l'île entre 1530 et 1700. Les excavations ont permis de mettre au jour de nombreux vestiges mobiliers attestant de la vie quotidienne des gardiens (*torregiani*) occupant la tour. Les vaisselles sont composées pour une large part de poteries d'importation en provenance de différents ateliers, essentiellement italiens, pour l'autre d'une production locale. Cette dernière se caractérise par sa chaîne opératoire de fabrication : il s'agit d'une vaisselle non-tournée et dégraissée à l'amiante. En ce sens elle s'inscrit dans une tradition de la fin du Moyen Âge. L'étude se concentre d'abord sur la chaine opératoire de production et fait intervenir des résultats de démarches expérimentales afin de clarifier certains aspects. Elle présente ensuite un bilan morphométrique avant d'évoquer les répertoires de formes. Elle révèle également certains aspects fonctionnels de cette production d'aspect grossier, complémentaire de l'usage des poteries d'importation. La mise en contexte met en lumière l'intérêt de la séquence, qui peut être considérée comme un ensemble de référence pour la période comprise entre la fin du XVIe et le début du XVIIe siècle dans le nord de la Corse.

Mots-clés. – Corse, époque moderne, tour littorale, poteries locales non tournées, technologie, typologie

---

Hormis dans certains cas particuliers et limités à un seul site (San Ghjuvani d'Ortolu ou le Bastion Saint-Georges d'Algajola[1]) ou à une période brève (voir l'étude de D. Chiva et I. Ojalvo sur les *pignate* du milieu du XXe siècle[2]), les études consacrées aux vaisselles produites en Corse durant les époques tardo-médiévale, moderne et subactuelle demeurent rares. Cette portion congrue, voire déconsidérée, d'une production pourtant omniprésente s'explique certes par sa mauvaise conservation mais surtout par son aspect grossier et fruste, qui tranche nettement avec les vaisselles qui lui sont contextuellement associées, importées du nord de l'Italie, d'Espagne et de Provence entre le XVe et le XVIIIe siècle[3]. De plus, jusqu'à très récemment, aucune collection numériquement fiable – *i.e.* incluant plusieurs dizaines de récipients avec des profils permettant de les caractériser morphologiquement – n'avait été mise au jour sur l'île.

Les fouilles préventives réalisées début 2015 par L. Vidal (Inrap) et son équipe sur la tour littorale de L'Osari (ou Lozari), à Belgodère, en Balagne, dans le nord-ouest de la Corse, permettent de combler ces lacunes pour la période 1580–1630 apr. J.-C. (datation d'après la chronologie issue de l'étude préliminaire des vaisselles importées et des monnaies). Ces travaux ont permis de prélever plusieurs milliers de tessons matérialisant quelques centaines de vases produits localement,

---

1 Istria 1993, 1995 ; Istria, Marchesi 1994.
2 Chiva, Ojalvo 2013.
3 Vallaury, Marchesi 2000.

Manuscript received 8th March 2022, accepted 27th October 2022

qui plus est dans une microrégion pour laquelle les sources mentionnent des ateliers de production. Le contexte – une structure défensive installée en bord de mer – suggère *a priori* une conservation et une utilisation particulière, voire spécialisée, de ces récipients et de leur composition en tant qu'ensembles, et ce, même si le bâtiment inclut évidemment un lieu de vie (de repas et de repos).

Cette contribution propose l'étude en plusieurs volets de ces productions :

– technologie : façonnées manuellement dans un espace méditerranéen où le tour de potier est employé de façon quasi exclusive depuis deux millénaires, cette poterie présente un archaïsme de fait. Ce point justifierait à lui seul l'intérêt d'une tentative de reconstitution des chaînes opératoires de production, qui demeurent pour l'heure méconnues. On envisage ici de développer un protocole expérimental afin de préciser des points techniques particuliers ;

– typologie : produire un répertoire des formes et des gabarits constitue un objectif évident. Dans un second temps, il s'agira d'en percevoir les éventuelles évolutions chronologiques ;

– fonction : à partir de la composition des lots, de la forme des vases et de leur distribution, on espère pouvoir proposer des hypothèses quant à leur utilisation dans ce contexte. Les éventuelles traces d'usage seront également examinées dans cette optique ;

– économie : par l'intrication des thèmes précédents, on cherchera à préciser l'insertion économique de ces vaisselles dans un cadre qui les associe[4] aux vases importés et dans une région où l'approvisionnement en poteries produites microlocalement (*i.e.* dans le nord-ouest de la Corse, région où sont dispersés les plus importants ateliers de l'île) est aisé.

L'idée maîtresse de cette contribution réside au final dans l'approche multivariée d'une catégorie matérielle dynamique, bien qu'à la fois artisanale et traditionnelle, constituant donc une vraie rareté dans l'Europe du début des temps modernes.

CONTEXTE

La tour de L'Osari est un monument à base circulaire (72,35 m²) construit sur un promontoire rocheux de 32 m d'altitude à l'ouest de la plage du même nom. Projetée en 1573, comme celles de Cala Rossa et de l'Acciolu, puis élevée vers 1575 par le maître maçon ligure Angelo Aicardo, elle appartient à une catégorie d'édifices érigés sur les littoraux insulaires entre 1530 et 1620 pour prévenir les attaques de pirates barbaresques. En 1584, elle est endommagée lors d'un raid mené par des pirates « turcs » venus d'Alger, avant d'être restaurée en 1585. Un document de 1617 dit qu'elle est gardée en permanence par deux hommes payés en grain par la communauté de Belgodère. En 1666, la garde est dite mal assurée. En 1724, elle ne sert plus[5].

Conservée sur près de la moitié de sa hauteur originelle, la tour a livré un abondant mobilier archéologique dispersé sur une stratigraphie présentant une puissance de près de 5 mètres, accumulée au-dessus du niveau d'effondrement de la voûte de la pièce inférieure (probablement abandonnée au lendemain de l'attaque de 1584).

La séquence matérielle est issue d'un dépotoir lié à une occupation mitoyenne. Cette accumulation sert de remblai. En conséquence, on ne peut exclure l'hypothèse d'une stratigraphie inversée, conjoncture liée à un éventuel stockage des déchets dans un lieu avant leur déplacement à un autre endroit[6]. Ce contexte livre beaucoup de vaisselles locales de cuisine, mais également des récipients importés (écuelles et plats de production pisane *a stecca*, pichets en faïence de Montelupo). Les éléments de faune et de malacofaune sont très présents. Certains objets en matière végétale ou en métal trahissent des caractères chimico-sédimentaires ayant conduit à un très bon degré de conservation. Enfin, plusieurs dizaines de plaques de schiste forment un exceptionnel ensemble de supports de gravures représentant des bateaux, des marelles, des oiseaux et des patronymes.

HISTORIQUE DES RECHERCHES ET PROBLÉMATIQUES

La Corse présente une particularité notable dans son contexte méditerranéen : le tour de potier n'y est

[4] « Associer » et non « opposer » car il se pourrait que l'importation réponde à des besoins autres que compléter les vaisselles locales de l'unique point de vue fonctionnel. Par exemple, pourquoi importer une marmite ligure réfractaire alors que les pots locaux peuvent avoir ce rôle ? En ce sens, le stimulus conduisant à l'importation a vraisemblablement des origines plus complexes et certainement multiples.

[5] Graziani 1992, 1999.

[6] C'est du moins ce que pourrait suggérer la présence d'une monnaie de 1634 dans une couche posée sur le substrat, sous le premier niveau de destruction (supposé de 1584). Les neuf monnaies datables du site sont datées entre 1559 et 1656.

importé qu'au XXe siècle[7] et, de fait, depuis le début du Néolithique et jusqu'à l'Entre-Deux-Guerres, la production potière est modelée, non industrielle, et se déroule le plus souvent dans un cadre familial. Ces presque huit millénaires d'évolution potière constituent un phylum extraordinairement long et rare à l'échelle continentale[8] et fournissent une focale d'observation diachronique sur les mutations et les traditions technologiques qui rythment l'histoire céramique insulaire.

Les vaisselles corses d'époques moderne et subcontemporaine n'ont jamais été étudiées de façon exhaustive. Néanmoins, deux publications en font leur thème principal. Le premier travail sur la question est un recueil d'informations d'ordre ethnographique réalisé par I. Chiva et D. Ojalvo[9] en 1958–1959, constitué d'enquêtes orales et d'observations techniques sur des sphères de production centrées sur le nord de l'île dans la première moitié du XXe siècle. Dès le départ, la focale est placée sur la présence d'amiante dans les pâtes, jugée « unique dans la gamme des céramiques étudiées à travers le monde[10] », assertion qui n'est plus vraie aujourd'hui (voir par exemple les contextes du Néolithique finlandais[11]). Il faut également signaler que plusieurs géologues du XIXe siècle avaient préalablement fourni des descriptions[12] tout à fait superposables à celles développées dans l'ouvrage de 1959. Une étude plus récente a mis à jour ces données en les replaçant dans un contexte plus archéologique et en proposant l'hypothèse d'une perduration des schémas de fabrication et des répertoires typo-fonctionnels de la fin du Moyen Âge (plus précisément du XIVe siècle[13]), toujours du point de vue de l'utilisation d'amiante dans les matrices argileuses.

Plus récemment, cette dernière question a connu des avancées pour une autre période, le second âge du Fer, phase C (ou période romaine républicaine) et l'époque alto-impériale, soit entre 250 av. J.-C. et 200 apr. J.-C. environ, durant laquelle les amphores et les vaisselles tournées importées côtoient en milieu domestique les poteries locales dites « peignées ». Cette production dégraissée à l'amiante et surfacée au peigne sur épiderme réhumidifié est typique du quart nord-est de l'île, où les filons d'amiante sont distribués. Une bibliographie assez conséquente est consacrée à ce type d'ustensile diffusé jusqu'en Etrurie et en Ligurie[14].

D'après ce rapide schéma évolutif, on se rend donc compte que les potiers insulaires ont « inventé » à deux reprises la poterie à pâte amiantée. Si les raisons de cette récurrence restent à établir avec certitude, on relatera ici quelques pistes interprétatives dont les principaux arguments avaient déjà été avancés avant nous. Au-delà de cette question spécifique, l'objectif de l'étude est de fournir une présentation détaillée de la chaîne opératoire de production basée sur l'observation directe des vestiges matériels, afin de la confronter à l'enquête ethnographique de 1958–1959[15]. Il s'agira aussi de dresser le catalogue des formes puis de proposer une interprétation fonctionnelle et une tentative d'insertion plus globale dans le contexte nord-insulaire d'époque moderne.

PRÉSENTATION ET ÉTAT DU CORPUS

La série céramique issue des fouilles menées en 2015 sur la tour littorale de L'Osari compte 4789 éléments (en NR) issus de vaisselles produites localement (fig. 1). Les niveaux les plus fournis sont les US 1031, 1032, 1034, 1035, 1037 et 1038[16]. Les productions insulaires constituent la majeure partie des vaisselles présentes sur le site, que l'on tienne compte du nombre de restes (NR), du nombre minimal

---

[7] À quelques possibles exceptions d'époque antique, puisqu'un atelier de sigillée a récemment été identifié à Sagone (Duperron tbp ; pour d'éventuels autres sites, voir : Pallares 1980). L'importation définitive du tour de potier ne s'est faite que ponctuellement et progressivement au lendemain de la Première Guerre Mondiale.

[8] Vallaury, Marchesi 2000.

[9] Chiva, Ojalvo 2013.

[10] Chiva, Ojalvo 2013, 23.

[11] Hulthén 1991 ; Nordqvist 2017.

[12] Gueymard 1883.

[13] « Les fouilles récentes sur les sites d'habitat ont permis de mettre en évidence une évolution de cette production insulaire à partir du XIVe siècle. À ce moment, elle adopte un certain nombre de particularités qu'elle conservera sans véritable modification jusque vers les années 1930, quand les derniers potiers cesseront de produire. Deux caractéristiques fondamentales permettent alors de distinguer cette céramique : la nature de la pâte et le répertoire des formes » (Istria 2007, 42).

[14] Arcelin 2014 ; Arcelin, Chapon 2014 ; Jehasse 1975 ; Pallecchi 2001 ; Paolini-Saez 2012 ; Peche-Quilichini 2015, 2020 ; Peche-Quilichini, Chapon 2015 ; Piccardi, Peche-Quilichini 2013 ; Weiss 1974.

[15] Chiva, Ojalvo 2013.

[16] Le seuil de fiabilité statistique a ici été arbitrairement placé à 200 tessons pour des raisons d'écart à la moyenne. Les six US concernées constituent près de 84 % du NR. L'US 1035 a, à elle seule, livré plus du tiers de la séquence.

Contexte	NR	NMI
US 1017	7	3
US 1018	2	1
US 1020	2	1
US 1021	16	3
US 1022	73	12
US 1023	143	17
US 1024	23	4
US 1025	59	14
US 1026	14	4
US 1027	63	10
US 1028	60	11
US 1029	142	23
US 1030	0	0
US 1031	711	133
US 1032	660	124
US 1034	329	62
US 1035	1622	215
US 1037	233	50
US 1038	464	77
US 2004	18	5
US 2005	35	7
US 2006	15	4
US 2007	19	5
US 2008	79	16
US 2009	0	0
Total	**4789**	**801**

Fig. 1. Tableau des effectifs de vaisselles locales par US (K. Peche-Quilichini)

Fig. 1. Table of the number of local dishes per US (K. Peche-Quilichini)

d'individus (NMI[17]) ou de la masse pondérale (M) des vestiges.

L'état de conservation des vestiges est très satisfaisant. En effet, malgré une évidente fragilité[18], les conditions d'enfouissement, probablement rapides[19] dans ce dépotoir, ont préservé les surfaces (et ainsi la possibilité d'observer les méthodes de surfaçage) et l'intégrité des panneaux de vases. Ainsi, plusieurs « entiers » archéologiques, permettant de reconstituer l'intégralité du profil, ont été individualisés.

TECHNOLOGIE

Les éléments constituants

Les matrices argileuses constituant les pâtes présentent une qualité assez constante qui suggère un approvisionnement fréquent et donc une origine locale de la matière première plastique. Cette constatation est toutefois contredite par une grande diversité géologique des éléments non plastiques présents dans ces argiles.

Le dégraissant n'est jamais surreprésenté dans les pâtes. Il ne montre pas non plus de granulométries remarquables. Sa distribution reste toutefois assez hétérogène. Les tranches permettent d'observer qu'il est constitué d'éléments issus d'arènes granitiques (essentiellement du quartz), de débris schisteux (dont très souvent des fibres d'amiante et des écailles de serpentine), de pisolithes associés à des grains calcaires, de charbons de bois[20] et plus rarement de petits végétaux (dont on sait, en raison de leur position dans la matrice argileuse, qu'ils ne sont pas des éléments organiques carbonisés lors de la cuisson). Seuls les éléments organiques sont retrouvés en combinaison avec les trois types de dégraissant minéral identifiés, à savoir granitique, schisteux et calcaire/pisolithique. Ces trois ambiances géologiques révélées par la composition des pâtes sont présentes localement à l'est du site, dans des régions où une tradition potière est attestée au moins dès le début de l'époque moderne. Elles induisent donc le sens des réseaux d'approvisionnement en produits finis.

Le type de pâte le plus fréquent est constitué d'argile dégraissée avec des microfibres d'amiante[21] et des grains de schiste, dans des proportions qui seront évoquées ci-après. Si ces derniers sont peut-être natu-

[17] Le NMI est ici réalisé sur le décompte (typologiquement pondéré) des bords.

[18] Due à des cuissons non abouties et à une certaine finesse des parois. Il faut néanmoins noter que l'Institut de Céramique Française de Sèvres, dans son enquête inédite de 1838, a souligné la remarquable cohésion mécanique des vaisselles du début du XIXe siècle en dépit de la faible épaisseur de leur paroi (Chiva, Ojalvo 2013, appendice 5).

[19] Qui-plus-est dans un sédiment sableux et organique (lits de rejets de posidonies utilisées comme banquettes avant d'être vidangées).

[20] La présence d'éléments combustibles au sein même des matrices argileuses avait été mentionnée lors d'une étude réalisée par l'Institut de Céramique Française de Sèvres (Chiva, Ojalvo 2013, appendice 5).

rellement présents dans les terres argileuses[22], les fibres d'amiante[23] sont quant à elles introduites volontairement, vraisemblablement à double dessein d'armaturer le vase[24] et de lui donner plus de résistance aux chocs thermiques[25] grâce aux propriétés ignifuges de ce matériau. Sur la base des analyses menées par l'Institut de Céramique Française de Sèvres, D. Istria[26] avance également l'hypothèse d'une étanchéité accrue grâce à l'introduction des fibres. Pour ce chercheur, l'innovation constituée par l'adjonction de ce matériau dans l'argile potière ne constitue pas seulement un critère technologique ; il s'agirait également d'un indice d'optimisation de l'effort/rendement dans un cadre rural rythmé par des activités saisonnières diversifiées (essentiellement l'élevage extensif et les polycultures), « permettant à l'artisan de répondre à une demande tout en s'affranchissant de contraintes économiques et techniques inhérentes à une production plus conventionnelle[27] ». Les autres mélanges incluent dans des proportions variées de l'amiante, des sables schisteux, granitiques, calcaires ou pisolithiques, combinés ou non. Ces nuances n'influent *a priori* pas sur les caractères du façonnage.

La quantification et l'étude de dispersion des différents composants dans la pâte ne peuvent pas se faire en se basant uniquement sur l'étude macroscopique ; elles nécessiteraient la mise en place d'un programme d'analyse pétrographique. Toutefois, d'utiles observations ethnographiques décrivent globalement les procédés de broyage, de mélange et de pétrissage en pratique dans le nord de l'île au début du XXe siècle[28] et permettent d'obtenir quelques informations complémentaires. Le taux de 20 à 30 % d'amiante (ou de trois volumes d'argile pour un volume de dégraissant) décrit par I. Chiva et D. Ojalvo[29] lors de leur entretien avec les potières de Canaja, qui correspond à celui évoqué par D. Istria[30] pour des éléments de vaisselles des sites de la Vetrice/Bastia, de la place Chiostru/Bastia et du Bastion Saint-Georges/Algajola, n'est clairement pas atteint à L'Osari, où il plafonne à des taux inférieurs (bien qu'indéterminés). Les dimensions des fibres sont assez variées, y compris sur un même récipient.

Les gisements d'amiante les plus proches sont distants d'au moins 24 km au nord-est (Cap Corse), est (Nebbiu) et sud-est (bassin de Ponte-Leccia) du site. À moins d'envisager une production sur place avec des matériaux importés, ce qui est hautement improbable, il faut imaginer que les *torregiani* se fournissaient donc chez des marchands ambulants (*i tragulini*)[31].

Les étapes du façonnage

On décrira ici les différents moments de la fabrication d'un vase-type par le potier, dans l'ordre chrono-technique (fig. 2).

Réalisation du fond et accroche de la paroi

Première étape du montage, les fonds sont obtenus par aplatissement d'un volume de pâte, probablement d'abord par percussion directe manuelle, puis par l'intermédiaire d'un rouleau, sur un support parfaitement plat (sur une *teghja* – pierre plate – ou une planche). Cette phase, qui dure jusqu'à l'obtention d'un disque plat épais d'environ 4 mm, se matérialise par un litage bien visible dans les tranches (caractérisé par une érosion en feuillets). La préforme circulaire est

---

[21] Localement surnommées *u tigliu/digliu* (qui se traduit par brin, fibre, voire amiante), mot dont la racine se retrouve dans l'étymologie du tilleul. Les variétés de couleur bleue (crocidolite) et surtout blanche (chrysotile) sont les mieux représentées dans les pâtes, suggérant une sélection des amiantes les plus efficaces en termes de résistivité thermique. Leur transformation en forstérite indique des cuissons parfois supérieures à 800 °C (Colomban, Kremenović 2020).

[22] Dans le nord de la Corse, au début du XXe siècle, une étape de décantation permettait d'améliorer la composition de l'argile par élimination de ces éléments non plastiques (Chiva, Ojalvo 2013, p. 24).

[23] Dont la longueur varie entre 1 et 8 mm.

[24] « Selon les potières du début du XXe siècle, l'amiante tient la terre et permet à la poterie de résister au feu, aussi bien lors de la cuisson que par la suite, lors de l'emploi des ustensiles sur le feu » (Chiva, Ojalvo 2013, p. 24). L'argument est repris par d'autres chercheurs : "*It appears that a selection of the most appropriate asbestos fibers has been made by ancient potters. Obviously, the good mechanical strength due to the fiber reinforcement (the fibrous behaviour of the length of the fiber pull-out reaches the millimetre range) was selectively searched for*" (Colomban, Kremenović 2020).

[25] « Comme ces argiles sont très grosses, et qu'elles éprouvent un trop grand retrait dans la cuisson, on y ajoute, autant que possible de l'amiante pour en lier les parties. Ces grès résistent bien au feu et pour tout ce qui tient aux usages domestiques » (Gueymard 1883, 134).

[26] Istria 2007, p. 46.

[27] Istria 2007, 48.

[28] Chiva, Ojalvo 2013, 24–25.

[29] Chiva, Ojalvo 2013, 24.

[30] Istria 2007, 43.

[31] Durant l'époque subcontemporaine, « la céramique […] est très largement diffusée par colportage compte tenu de la rareté des centres urbains et des foires » (Istria 2007, 44). À noter que les productions à pâte amiantée sont présentes dans le sud de l'île dès le XVe siècle (Istria 1993, 149–150), illustrant bien l'efficacité des réseaux de distribution (par voie maritime ?) tardo-médiévaux.

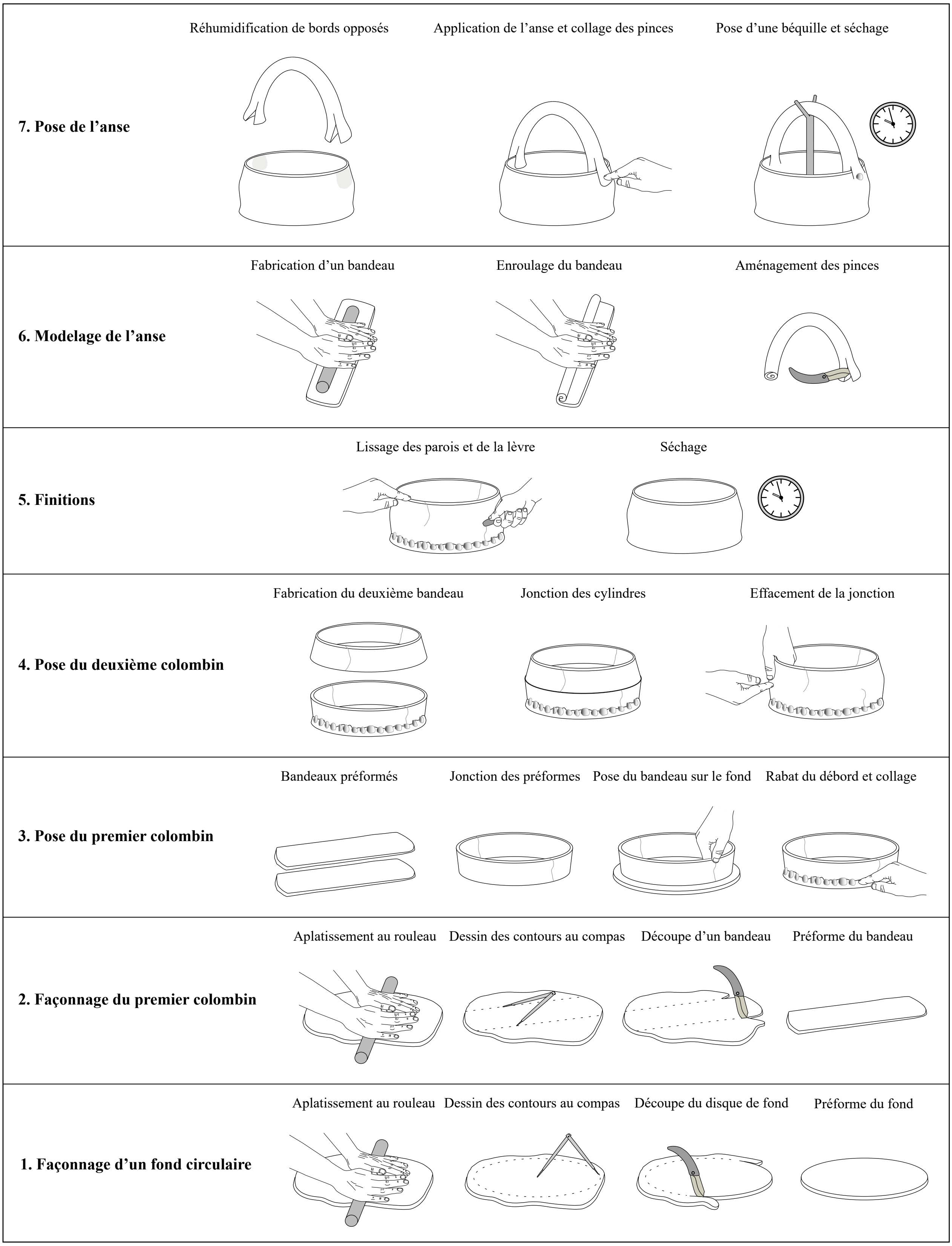


Fig. 2. Schéma de façonnage d'un récipient bas à anse de panier (K. Peche-Quilichini)

Fig. 2. Chaine opératoire *of the shaping of a low container with basket handle (K. Peche-Quilichini)*

par la suite découpée au couteau sur sa périphérie afin d'obtenir une forme ronde régulière, peut-être avec l'aide d'un compas. Beaucoup de fonds présentent une forme concave qui semble résulter d'un retrait lors du séchage[32]. Quelques rares exemplaires sont munis d'un petit pied annulaire, dans les US 1029 et 1035[33] (fig. 3a). D'autres fonds ont été percés avant cuisson.

Lorsque le fond est terminé, on produit au rouleau un ou deux bandeau(x) rectangulaire(s) allongé(s), dont les longs côtés étaient vraisemblablement découpés au couteau. La (les) pièce(s) est (sont) ensuite jointe(s) sur ses (leurs) extrémités pour former un cylindre[34], qui est alors posé sur le disque de fond. Le diamètre de ce bandeau est toujours plus petit que celui de la base : la paroi est appliquée à peu de distance[35] du bord du disque (entre 1 et 2,5 cm) et étalée, côté interne, sur la partie supérieure du fond[36] afin d'amplifier son adhérence (fig. 3b). On replie ensuite le débord du disque basal contre la paroi externe du cylindre formé par le premier colombin aplati. L'adhésion de l'ensemble est renforcée par pression digitale bilatérale, dont les traces, qui prennent la forme de dépressions subovalaires juxtaposées (ou plus rarement partiellement superposées), sont fréquemment visibles (fig. 3c) car n'ayant pas été successivement effacées lors du lissage. Ces protocoles donnent un profil talonné à la base des récipients[37]. Cette action se matérialise dans la tranche par une ligne de jonction allongée et oblique.

Montage de la paroi

La paroi est conçue par superposition de quelques colombins étirés tels des bandeaux de 4 à 8 cm de haut. Les jonctions servent assez souvent à l'articulation des profils, notamment dans le cas de vases à col. Des colombins moins hauts sont parfois employés pour les parties orales (sous l'ouverture) et pour les vases de petit gabarit. L'accroche inter-bandeaux est toujours de type oblique, trahissant le collage de deux biseaux collés par pression digitale. Sur l'épiderme, les jonctions sont effacées par pression puis lors du surfaçage, même si subsistent des variations d'épaisseur assez nettes. Parfois, des pressions digitales semblent liées à une volonté de provoquer une légère modification de profil, comme par exemple un évasement plus marqué. Quelques cupules de pression marquent des points de support des doigts du potier durant l'opération (fig. 3d). Les érosions en feuillets constatées sur les parois semblent dues à l'important litage des colombins[38], suggérant un étirement extrême des bandeaux de pâte pour obtenir des parois épaisses de 3 à 5 mm en moyenne[39]. Ces observations vont à l'encontre d'une proposition récemment publiée[40].

L'aménagement de la lèvre ne fait pas l'objet d'un geste particulier. Sa section est généralement arrondie ou à peine convexe. Un bord de l'US 1035 porte une perforation sub-labiale pré-cuisson (Pl. VII, n° 23). Un autre de l'US 1031 montre un pliage à 90° vers l'intérieur pour former un étalement.

Pose de l'anse : observations et apports des façonnages expérimentaux

La pose de l'anse « de panier[41] » est l'étape terminale du montage pour une grande partie des vases de

---

32 Ce phénomène avait déjà été noté : « le séchage doit être constamment surveillé, car les fonds ont tendance à gonfler, à se bomber vers l'intérieur et il faut les aplatir avant que la pâte ne devienne trop dure » (Chiva, Ojalvo 2013, 25).

33 Un exemplaire de l'US 1035 montre l'adjonction d'un pied avant l'ajout d'une rustine qui vient combler l'espace délimité par la collerette, illustrant un changement de forme décidé lors du façonnage de la base.

34 Technique déjà observée pour l'époque immédiatement précédente (XIVe/XVIe siècles) : « modelage à partir d'une plaque d'argile très fine de forme rectangulaire, dont les deux extrémités sont collées bord à bord de manière à former un cylindre. Le fond est ensuite réalisé avec une seconde plaque d'argile de forme circulaire. » (Istria 1993, 79). Au Bastion Saint-Georges (Istria, Marchesi 1994, 133), les « céramiques à l'amiante, [sont produites à partir] d'une plaque d'argile dont deux des extrémités sont collées bord à bord de manière à former un cylindre progressivement mis en forme ».

35 Cette régularité suggère une bonne connaissance du rapport de π.

36 Parfois, la surface supérieure du fond, du moins la zone d'accueil du premier colombin de paroi, a été préalablement guillochée afin d'améliorer l'accroche. Ce protocole a été repéré sur un fond de l'US 1035.

37 D. Istria (1993, 81) dit des *pignule* du XIVe siècle, époque de leur apparition, que leur « fond est toujours plat mais il peut être, soit en continuation avec la paroi, soit, et c'est le cas le plus fréquent, présenter un angle vif et un léger étranglement à l'écrasement de la pâte lors du collage de la panse avec le fond ».

38 Istria 2007, 43.

39 Cette faible épaisseur de même que le litage des tranches, trahit l'utilisation de bandeaux aplatis au rouleau. La technique permet d'économiser les ressources et d'alléger les poteries (Istria 1993, 83).

40 "*A preferential orientation of the [asbestos] fibers is observed perpendicular to the section of the pottery. This is consistent with a shaping on a potter's wheel, which orients the bundles of fibers by the turning movement and pressure of the hands*" (Colomban, Kremenović 2020). On pense, au contraire, que les orientations préférentielles sont le résultat de l'étirement des colombins au rouleau durant le montage.

41 Seul un récipient présente un autre type de dispositif de préhension : une tasse de l'US 1035 munie d'une anse verticale en boudin.

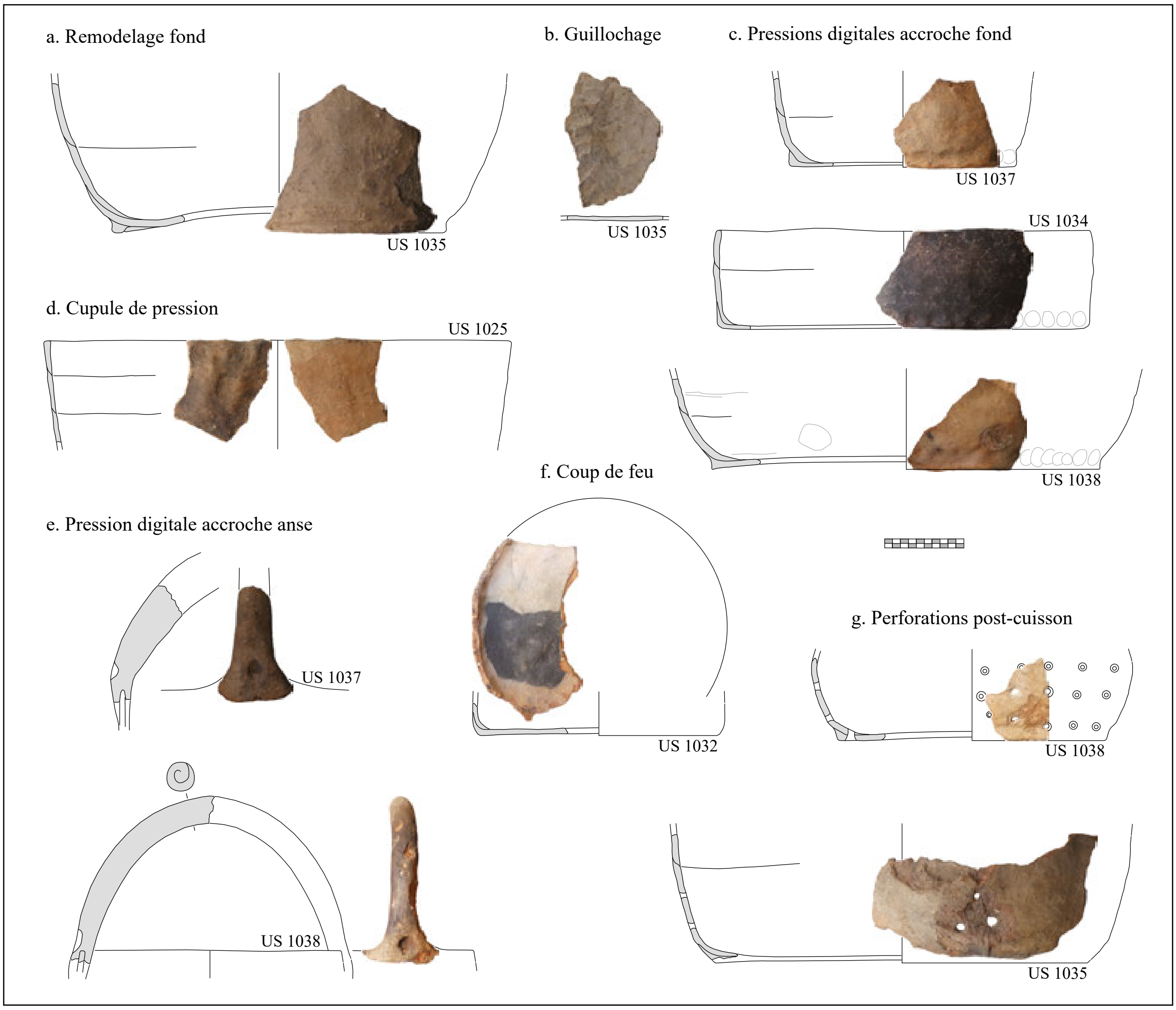


Fig. 3. Macrotraces de façonnage, de cuisson et de manipulation post-cuisson (K. Peche-Quilichini)

Fig. 3. Macrotraces of shaping, firing and post-firing characters (K. Peche-Quilichini)

la séquence. Ce dispositif de préhension est réalisé exactement comme un colombin : à partir d'un boudin de pâte, on modèle un long bandeau à l'aide d'un rouleau puis on le roule sur lui-même en spirale (s'il est assez large) ou en boucle (s'il est étroit) afin d'obtenir un élément de section subcirculaire long de plusieurs décimètres. Ce protocole s'observe très bien sur les tranches transversales des anses. Les deux extrémités sont ensuite aplaties avant que l'on y aménage une sorte de pince qui facilitera l'accroche sur le rebord du récipient. Le boudin est recourbé puis l'anse peut être placée sur le bord tout en s'adaptant plastiquement à son diamètre. Les « pinces » sont alors refermées et largement étalées sur la paroi interne et externe[42] afin de solidifier le montage. Cette étape exige une manipulation complexe du boudin d'anse et a laissé de nombreuses traces d'écrasement de l'épiderme argileux. Parfois, une dépression est présente sur l'extérieur de la pince (fig. 3e) ; il s'agit du négatif de pression digitale d'accroche de la partie extérieure du dispositif. La technique de collage de l'anse par perforation et emboîtement décrite pour le début du XXe siècle[43] est ici

[42] On peut voir ici une distinction avec les productions tardo-médiévales. Sur ces dernières, l'anse est collée uniquement contre la paroi interne (Istria 2007, 44).

[43] Chiva, Ojalvo 2013, 25–26.

totalement absente. En fonction des US, entre 8 et 35 % des vases étaient pourvus d'une anse de panier, 16 % en moyenne à l'échelle de l'intégralité de la séquence[44]. Ces dispositifs caractérisent surtout les vases les plus profonds et ceux à partie supérieure convergente, bien que cela ne soit pas exclusif.

Si toutes les descriptions proposées ici pour l'analyse technologique résultent d'observations directes, on précise avoir également procédé à des vérifications expérimentales pour tester la faisabilité et les éventuels biais des différentes étapes supposées de la chaîne opératoire. Dans l'ensemble, aucune particularité n'a été mise en évidence lors des démarches auturgiques, sauf dans le cas de la pose des anses. En effet, il a pu être observé un double problème technique lors de l'opération :

– le poids de l'anse provoque un évasement du rebord au niveau des deux points de jonction. Cette déformation induit une déchirure des parois et donc un effondrement de l'anse ;

– l'anse, même si elle est bien fixée, a tendance à tomber d'un côté ou l'autre de ses deux accroches sous l'effet de son propre poids.

Afin de remédier à ces problèmes, on a pu déterminer que les anses étaient fixées sur des pots semi-secs à secs, et/ou à surface d'accroche réhumidifiée[45], et que l'anse pouvait être soutenue par un système de béquille lors du séchage.

Surfaçage

L'ensemble de la série illustre une réhumidification à la barbotine des parois à la fin du façonnage ou, plus vraisemblablement, après une phase avancée du séchage (qui était sans doute pratiqué « à l'ombre »). Ce geste précède toujours un lissage au doigt (ou au galet) destiné à gommer les aspérités principales, les craquelures superficielles et les jonctions de montage[46]. Sur la paroi externe, les traces de ce traitement sont généralement multidirectionnelles. Sur la paroi interne, le protocole est plus abouti et les traces sont le plus souvent horizontales, parallèles au bord. Ces vaisselles ne sont jamais décorées et ne portent aucun revêtement.

Cuisson

Après un temps de séchage (post-réhumidification) indéterminé (entre deux et sept jours vraisemblablement[47]), la grande majorité des cuissons a été effectuée en atmosphère ouverte, oxydante, donnant aux vaisselles une couleur ocrée, du jaune au rouge, avec un cœur de tranche souvent très sombre. Beaucoup de taches noires de type « coup de feu » illustrent des contacts directs et prolongés avec le combustible ou d'autres récipients (fig. 3f). Le type de structure de cuisson ne peut être déterminé avec certitude. L'hypothèse de l'utilisation des fours à pain distribués autour des lieux de vie est viable. Des cuissons en aire ouverte sont aussi parfois évoquées[48].

Sur plusieurs récipients, l'hypothèse d'une altération post-dépositionnelle ne suffit pas à expliquer le délitement superficiel de la matière. Il est en fait fort probable que l'on ait utilisé des vases partiellement cuits[49] (ou cuits seulement lors de l'usage), notamment pour une utilisation liée à du petit stockage de produits secs. Cela expliquerait notamment les nombreux cas de décrochages de l'anse de panier.

Entretien, transformations et traces d'utilisation

Certaines perforations réalisées après cuisson laissent croire que certains rares vases[50] ont été réparés au moyen de la technique de suture avec lien en matériau périssable, protocole pratiqué en Corse depuis le Néolithique[51]. Les US 1035 (1 cas), 1031 (1 cas), 1032 (1 cas) et 1038 (1 cas) attestent de tels exemples qui ne doivent pas être confondus avec les perforations réalisées pré-cuisson[52]. L'observation fine de ces trous permet d'ailleurs de les distinguer facilement : les perforations

44 Voir chapitre 6 pour les profils associés.

45 Ce protocole s'apparente à celui décrit par D. Istria (1993, 79) pour les vaisselles des XIVe/XVIe siècles : « Les anses ne sont placées que dans une dernière phase, lorsque la pièce est pratiquement sèche ».

46 Sur ce point, les descriptions ethnographiques sont totalement superposables : « la potière prépare un mélange assez liquide, en délayant dans de l'eau des chutes de pâte et de l'amiante […] À la main nue, elle enduit de ce mélange (*a linta*) toute la surface de la pièce, aussi bien à l'extérieur qu'à l'intérieur » (Chiva, Ojalvo 2013, 26).

47 Selon A. Raffaelli (information orale), au début du XXe siècle, les potières de Canaghja pratiquaient une étape ultime de séchage en approchant les vases de paille enflammée, ce qui pouvait noircir les parois.

48 Chiva, Ojalvo 2013, appendice 2 ; Istria 1993, 79 ; Colomban, Kremenović 2020.

49 Ce que pourrait laisser croire l'utilisation privilégiée des fours à pain.

50 En proportion, les vases importés sont réparés bien plus souvent.

51 Peche-Quilichini et al. 2017.

52 « Il n'est pas rare de voir encore en usage des grilloirs à châtaignes, dont le fond, sérieusement abîmé, a été réparé avec des morceaux de fil de fer ou de tôle » (Chiva, Ojalvo 2013, 26).

	1,5–2,49 mm	2,5–3,49 mm	3,5–4,49 mm	4,5–5,49 mm	5,5–6,49 mm	6,5–7,49 mm
US 1031	0,00	45,05	46,15	6,59	2,20	0,00
US 1032	0,94	32,08	50,00	15,09	0,94	0,94
US 1034	2,78	30,56	50,00	19,44	0,00	0,00
US 1035	0,52	32,98	47,12	16,75	2,62	0,00
US 1037	0,00	18,18	54,54	22,73	0,00	4,54
US 1038	0,00	19,12	54,41	17,65	8,82	0,00
Moyenne	0,71	29,66	50,37	16,38	2,43	0,91

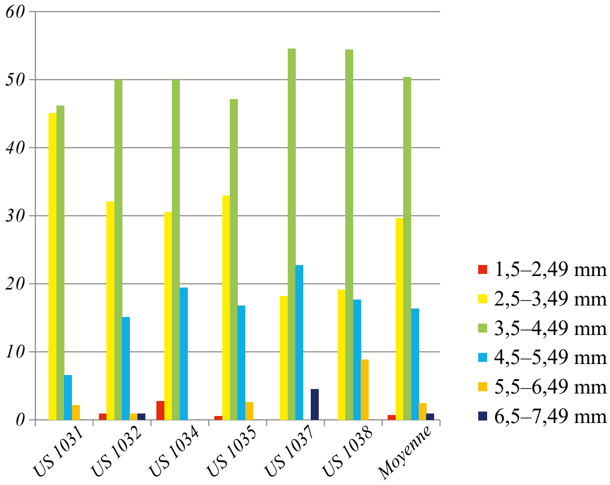


Fig. 4. Histogramme de distribution d'épaisseur des parois, US caractéristiques (K. Peche-Quilichini)

Fig. 4. Histogram of wall thickness distribution, US characteristics (K. Peche-Quilichini)

pré-cuisson sont toujours cernées d'un anneau de pâte montrant le sens du geste de forage alors que les perforations post-cuisson montrent une section biconique révélatrice d'une attaque bilatérale (fig. 3g).

Il faut également signaler un cas de multiforage de la partie inférieure (et du fond) d'un récipient de l'US 1038, transformé en passoire ou en faisselle.

À noter aussi que bon nombre de vases portent sur la paroi externe des résidus carbonisés couvrant de larges surfaces[53], prouvant une utilisation culinaire de ces pots. Il faut enfin souligner ici l'absence totale, au niveau de l'arc inférieur des anses, des traces que n'aurait pas manqué de laisser une crémaillère en métal. En conséquence, il faut imaginer que ces pots allaient au feu d'une autre façon, ou étaient suspendus au moyen d'une pièce intermédiaire tel un anneau de corde ou de cuir. Cependant, cette dernière hypothèse demeure peu probable en raison de la relative fragilité des systèmes d'accroche de l'anse (illustrée par de nombreux décollages anciens), qui-plus-est lors d'une utilisation d'un vase alourdi par son contenu. L'examen des fonds des marmites, qui ne présente malheureusement pas vraiment de colorimétrie préférentielle, n'apporte pas de complément informatif sur l'organisation du feu de cuisine.

ASPECTS MORPHOMÉTRIQUES

Epaisseur de la paroi

Afin de produire une cohérence, la mesure de l'épaisseur de la paroi d'un vase a systématiquement été faite à 2 cm sous la lèvre car il s'agit d'un point dont la position est facilement identifiable lors de la manipulation. Près de 600 épaisseurs ont été mesurées (pour environ 1000 tessons labiaux). L'étude présentée ici ne porte que sur 514 d'entre eux, constituant l'intégralité des mesures réalisées dans les six US dont les corpus assuraient une certaine fiabilité numérique[54]. La répartition (fig. 4) montre que près de 50 % des mesures se distribuent entre 3,5 et 4,5 mm d'épaisseur. L'US 1031 montre une tendance à la réalisation de parois légèrement plus fines (autour de 3,5 mm en

[53] « Suie et dépôts graisseux d'aliments forment souvent une vraie croûte qui enrobe les objets […] cette croûte est très visible lorsqu'elle s'écaille par suite d'une accumulation excessive ou lorsque l'objet est ébréché » (Chiva, Ojalvo 2013, 32).

[54] US 1031 : 91 mesures ; US 1032 : 106 mesures ; US 1034 : 36 mesures ; US 1035 : 191 mesures ; US 1037 : 22 mesures ; US 1038 : 68 mesures.

	1,5–2,49 mm	2,5–3,49 mm	3,5–4,49 mm	4,5–5,49 mm	5,5–6,49 mm	6,5–7,49 mm	7,5–8,49 mm
US 1031	0,00	28,57	44,90	22,45	4,08	2,04	0,00
US 1032	0,00	16,18	47,06	26,47	5,88	4,41	0,00
US 1034	0,00	18,37	46,94	28,57	6,12	0,00	0,00
US 1035	0,00	23,90	40,88	28,93	6,29	0,00	0,00
US 1037	0,00	19,23	46,15	30,77	3,85	0,00	0,00
US 1038	0,00	23,91	41,30	30,43	2,17	2,17	0,00
Moyenne	0,00	21,69	44,54	27,94	4,73	1,44	0,00

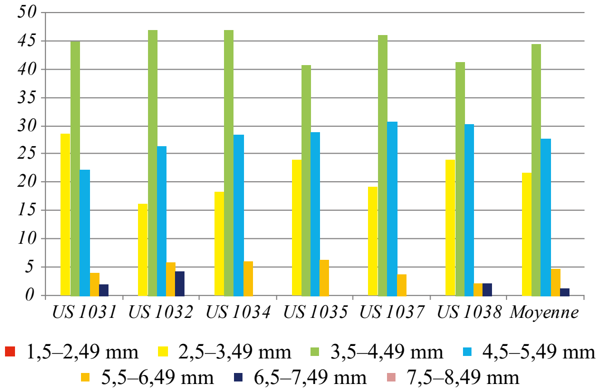


Fig. 5. Histogramme de distribution d'épaisseur des fonds, US caractéristiques (K. Peche-Quilichini)

Fig. 5. Histogram of background thickness distribution, US characteristics (K. Peche-Quilichini)

moyenne), alors que les US 1038/1037 illustrent l'inverse, avec des valeurs moyennes légèrement supérieures à 4 mm. Cette constatation pourrait être interprétée comme l'expression d'un amincissement progressif des parois des vases au long de l'occupation, toutefois trop subtil pour trahir une véritable démarche technique consciente. Il pourrait aussi s'agir d'une modification du circuit d'approvisionnement entre l'époque des US 1038/1037, qui sont à la base du dépotoir, et celle des US sus-jacentes (US 1036, 1034, et 1032=1031 dans l'ordre de succession chrono-stratigraphique[55]), immédiatement plus récentes. Si la distribution des valeurs basses est globalement de type normal, celle des valeurs hautes montre un étalement qui illustre la présence de rares vases à paroi épaisse (6 ou 7 mm), surtout pour les US 1038/1037, qui constituent encore une fois un ensemble cohérent. Dans tous les cas de figures, les épaisseurs de paroi varient entre 2 et 7 mm, ce qui constitue un spectre très homogène et souligne l'utilisation globale de vases à paroi très peu épaisse. Il faut toutefois noter des variations d'épaisseur assez fortes sur un même vase, qui peuvent varier d'environ 40 %, surtout en périphérie des jonctions de colombins et sur les cintres d'inflexion.

Epaisseur du fond

La mesure de l'épaisseur du fond a systématiquement été réalisée à 2 cm de la jonction avec la panse car il s'agit d'un point dont la position est facilement identifiable lors de la manipulation. Il présente aussi souvent l'intérêt d'être exempt de déformation plastique liée au collage des élévations. Près de 480 épaisseurs ont été mesurées (pour environ 650 tessons basaux). Le bilan énoncé ici porte sur 397 d'entre eux, compilant les mesures réalisées pour les six US citées précédemment[56]. L'analyse de répartition (fig. 5) montre que près de 44,5 % des fonds présentent une

[55] Il faut préciser ici que l'US 1035 est directement au contact de l'US 1037 et a livré une monnaie produite entre 1572 et 1618. Sur l'US 1035 se met en place un effondrement partiel (US 1036) qui est postérieur à celui de 1584. Sur cet horizon, un nouveau dépotoir est aménagé (US 1034), d'où provient une monnaie émise entre 1653 et 1656. Suit une nouvelle détérioration des maçonneries (US 1033) puis une autre phase de sédimentation (US 1032=1031), d'où provient une monnaie dont la frappe est datée entre 1572 et 1616. Ce dernier niveau semble donc datable d'après 1650.

[56] US 1031 : 49 mesures ; US 1032 : 68 mesures ; US 1034 : 49 mesures ; US 1035 : 159 mesures ; US 1037 : 26 mesures ; US 1038 : 46 mesures.

US/Ø mm	14 mm	15 mm	16 mm	17 mm	18 mm	19 mm	20 mm	21 mm	22 mm	23 mm	24 mm	25 mm	26 mm	27 mm	28 mm	29 mm	30 mm	31 mm	32 mm	33 mm	34 mm	35 mm	36 mm	37 mm	38 mm	39 mm	40 mm	41 mm	Total
US 1017	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
US 1019	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
US 1022	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
US 1023	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	2
US 1025	0	0	0	0	0	1	0	0	1	4	1	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	10
US 1026	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
US 1028	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	4
US 1029	0	0	0	0	0	0	1	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
US 1031	0	0	0	0	0	0	1	1	7	7	4	4	3	1	1	0	1	0	1	0	0	0	1	0	0	0	0	0	32
US 1032	0	0	0	1	1	1	1	3	1	2	2	3	0	1	0	0	1	2	0	1	0	2	0	0	0	0	0	0	22
US 1034	0	0	0	0	1	1	1	2	2	2	0	2	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	14
US 1035	0	1	0	1	3	3	4	3	6	12	9	2	3	6	5	3	1	0	0	0	1	1	1	1	2	0	0	0	68
US 1037	0	0	1	1	0	0	0	1	3	1	2	1	0	1	1	2	0	0	0	0	0	0	0	1	0	0	1	0	16
US 1038	0	0	0	0	0	1	1	3	2	1	1	1	4	1	0	1	0	0	0	0	0	1	0	0	0	0	0	0	17
US 2004	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
US 2005	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2
US 2008	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	3
Total	0	1	1	4	5	8	9	17	23	29	23	17	13	10	10	7	6	3	2	1	1	4	2	2	2	0	1	0	201

épaisseur comprise entre 3,5 et 4,5 mm (moyenne générale : 4,1 mm). L'US 1031 montre une tendance à la réalisation de fonds légèrement moins épais (autour de 3,8 mm en moyenne), ce qui conforte la tendance observée pour les épaisseurs de paroi de cette US. La distribution des valeurs les plus basses est de type normal. Quelques vases à fond épais (6 à 7 mm) ont été observés. Sur certains, on note des variations assez fortes (environ 30 %). Les fonds concaves suivent une tendance tout à fait superposable.

Diamètre de l'anse

La plupart des vases de la séquence est équipée d'un dispositif de préhension de type anse de panier à section circulaire (ou subcirculaire) fixée sur le rebord. Cette anse présente un diamètre transversal à peu près constant dès lors qu'on le mesure à près de 5 cm au-dessus des zones pincées lors de sa fixation sur le récipient. Le diamètre a donc été mesuré sur l'arc.

Au total, 201diamètres ont été mesurés, pour près de 350 fragments d'anses. Les valeurs s'échelonnent entre 15 et 40 mm. Plus de 37 % des anses présentent un diamètre compris entre 22 et 24 mm (fig. 6). La distribution des valeurs est de type normal, légèrement étalée vers les valeurs hautes, ce qui tendrait à montrer l'existence d'une classe de grosses anses liées à des vases au volume un peu plus important que la moyenne, notamment pour les US 1035 et 1032. Hormis cette tendance, les schémas sont assez superposables pour l'ensemble de la série. L'analyse de corrélation avec le diamètre à l'ouverture ou avec la courbure de l'arc n'apporte pas d'information complémentaire.

Diamètre à l'ouverture

Le diamètre à l'ouverture est estimé à partir du cintre de la lèvre. Les deux grandes limites de cette analyse sont l'irrégularité horizontale de l'ouverture, qui infléchit le profil du récipient, et celle du galbe, notamment provoquée par l'adjonction fréquente d'un dispositif de préhension. La première provoque une incertitude en termes d'orientation du rebord (et donc de diamètre). La seconde implique une surestimation du

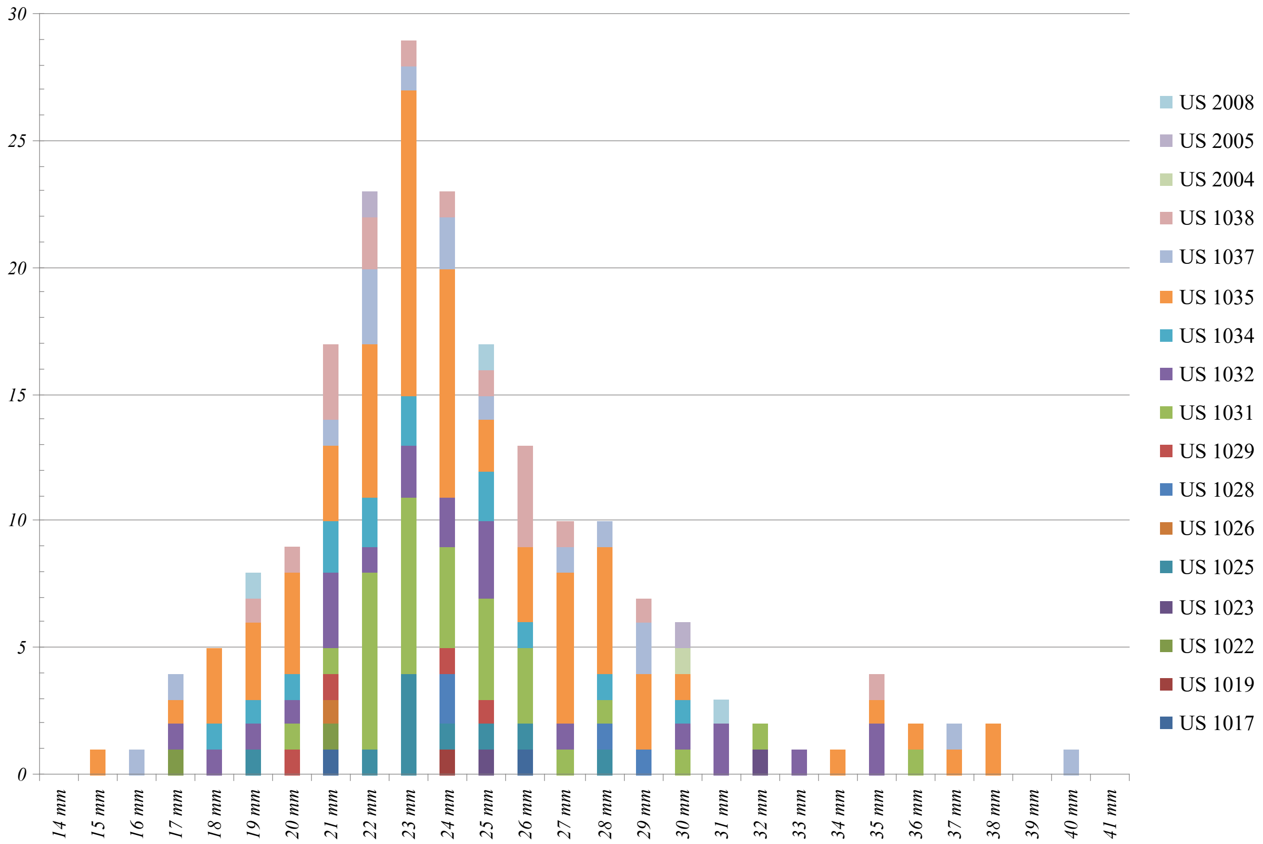


Fig. 6. Histogramme de distribution du diamètre des anses de panier, toutes US (K. Peche-Quilichini)

Fig. 6. Histogram of distribution of basket handle diameter, all US (K. Peche-Quilichini)

	8,5–11,49	11,5–14,49	14,5–17,49	17,5–20,49	20,5–23,49	23,5–26,49	26,5–29,49	29,5–32,49	32,5–35,49	35,5–38,49	38,5–41,49	41,5–44,49	Total
US 1019	0	0	0	1	0	0	0	0	0	0	0	0	1
US 1020	0	0	0	0	1	0	0	0	0	0	0	0	1
US 1022	0	0	0	0	0	1	0	0	0	0	0	0	1
US 1023	0	0	0	1	1	2	0	0	0	0	0	0	4
US 1025	0	0	0	2	3	6	0	1	1	0	0	0	13
US 1027	0	0	1	0	0	1	0	0	0	0	0	0	2
US 1029	0	0	0	2	3	1	1	2	0	0	0	0	9
US 1031	1	2	4	5	10	19	12	3	3	1	0	0	60
US 1032	0	1	1	8	13	23	6	3	0	0	0	0	55
US 1034	0	0	3	3	6	8	6	2	0	0	0	0	28
US 1035	0	2	5	19	23	34	16	13	12	2	3	1	130
US 1037	0	0	1	1	3	3	2	1	0	1	0	0	12
US 1038	0	1	0	5	12	15	3	8	1	0	0	0	45
US 2004	0	0	0	0	0	1	0	0	0	0	0	0	1
US 2006	0	0	0	1	0	0	0	0	0	0	0	0	1
Total	1	6	15	48	75	114	46	33	17	4	3	1	363

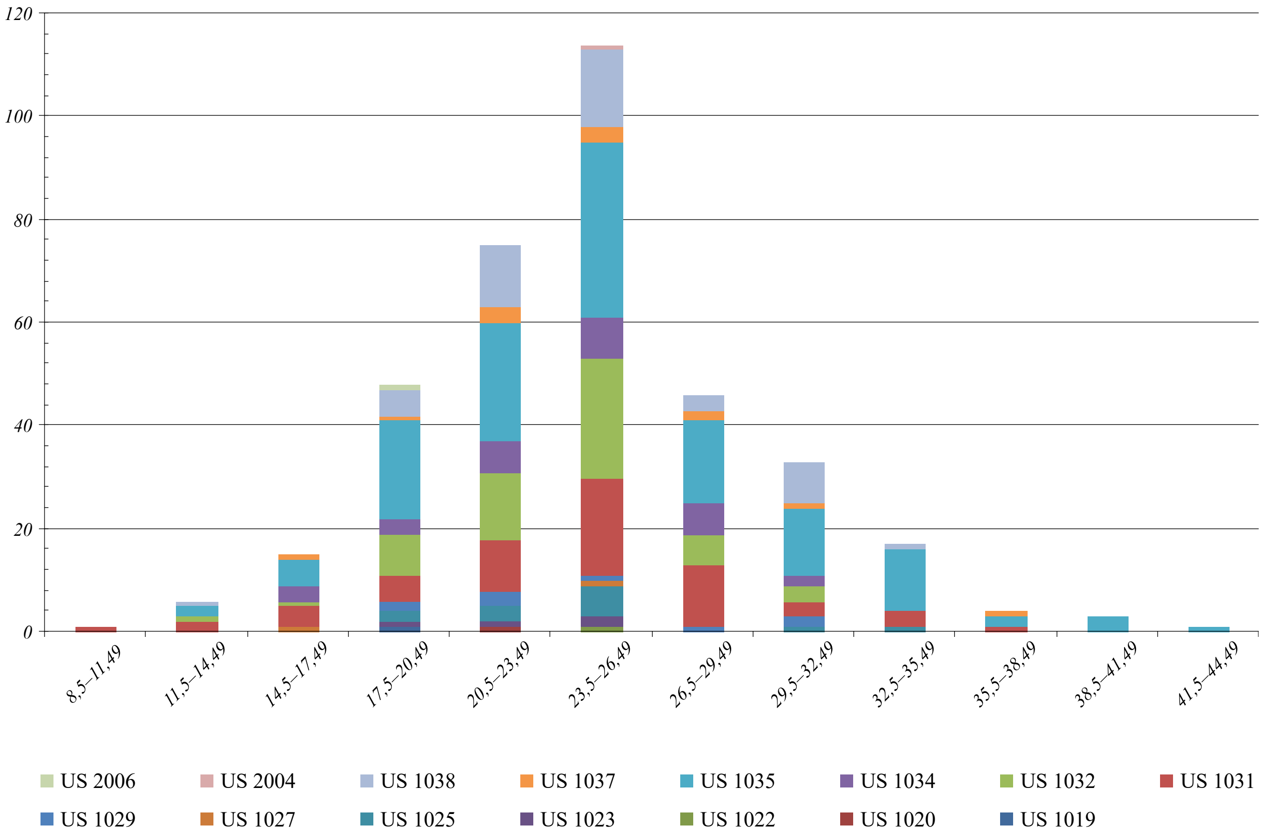


Fig. 7. Histogramme de distribution du diamètre à l'ouverture, toutes US (K. Peche-Quilichini)

Fig. 7. Histogram of opening diameter distribution, all US (K. Peche-Quilichini)

	8,5–11,49	11,5–14,49	14,5–17,49	17,5–20,49	20,5–23,49	23,5–26,49	26,5–29,49	29,5–32,49	32,5–35,49	35,5–38,49	Total
US 1017	0	1	0	0	0	0	0	0	0	0	1
US 1021	0	0	0	0	1	0	0	0	0	0	1
US 1022	0	0	0	2	0	0	0	0	0	0	2
US 1023	0	0	0	0	0	0	1	0	0	0	1
US 1025	0	2	2	4	1	1	0	0	0	0	10
US 1027	1	0	0	0	0	1	0	0	0	0	2
US 1029	0	0	0	1	0	1	0	0	0	0	2
US 1031	0	1	5	6	11	4	0	0	0	0	27
US 1032	1	0	6	7	8	6	2	2	0	0	32
US 1034	0	1	4	8	9	5	2	1	0	0	30
US 1035	3	4	14	15	22	18	12	4	1	1	94
US 1037	0	1	3	6	1	1	2	0	0	0	14
US 1038	1	2	1	4	6	5	1	3	0	0	23
US 2004	0	0	0	1	0	0	0	0	0	0	1
Total	6	12	35	54	59	42	20	10	1	1	240

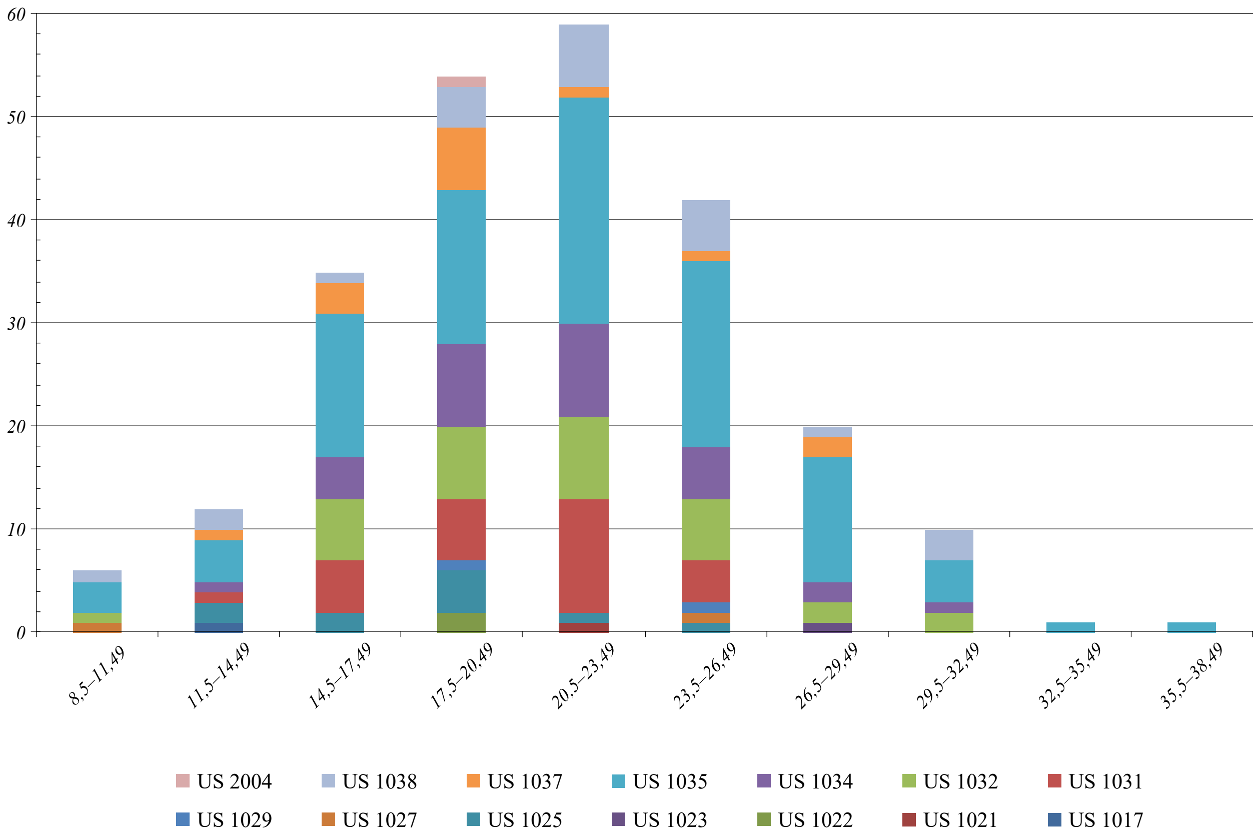


Fig. 8. Histogramme de distribution du diamètre du fond, toutes US (K. Peche-Quilichini)

Fig. 8. Histogram of bottom diameter distribution, all US (K. Peche-Quilichini)

	9–10,99	11–12,99	13–14,99	15–16,99	17–18,99	19–20,99	21–22,99	23–24,99	25–26,99	27–28,99	29–30,99	31–32,99	33–34,99	Total
US 1025	0	1	0	0	0	0	0	0	0	0	0	0	0	1
US 1029	0	0	0	0	0	0	0	1	0	1	0	0	0	2
US 1031	0	0	1	0	0	0	0	0	0	0	0	0	0	1
US 1032	0	1	0	0	0	0	0	2	1	0	0	0	0	4
US 1034	0	1	0	0	0	0	0	1	0	0	0	0	0	2
US 1035	0	3	6	1	2	0	0	0	1	1	0	1	0	15
US 1037	0	2	0	0	0	0	0	2	1	0	0	0	0	5
US 1038	0	0	0	1	0	0	0	0	0	0	0	0	0	1
Total	0	8	7	2	2	0	0	6	3	2	0	1	0	31

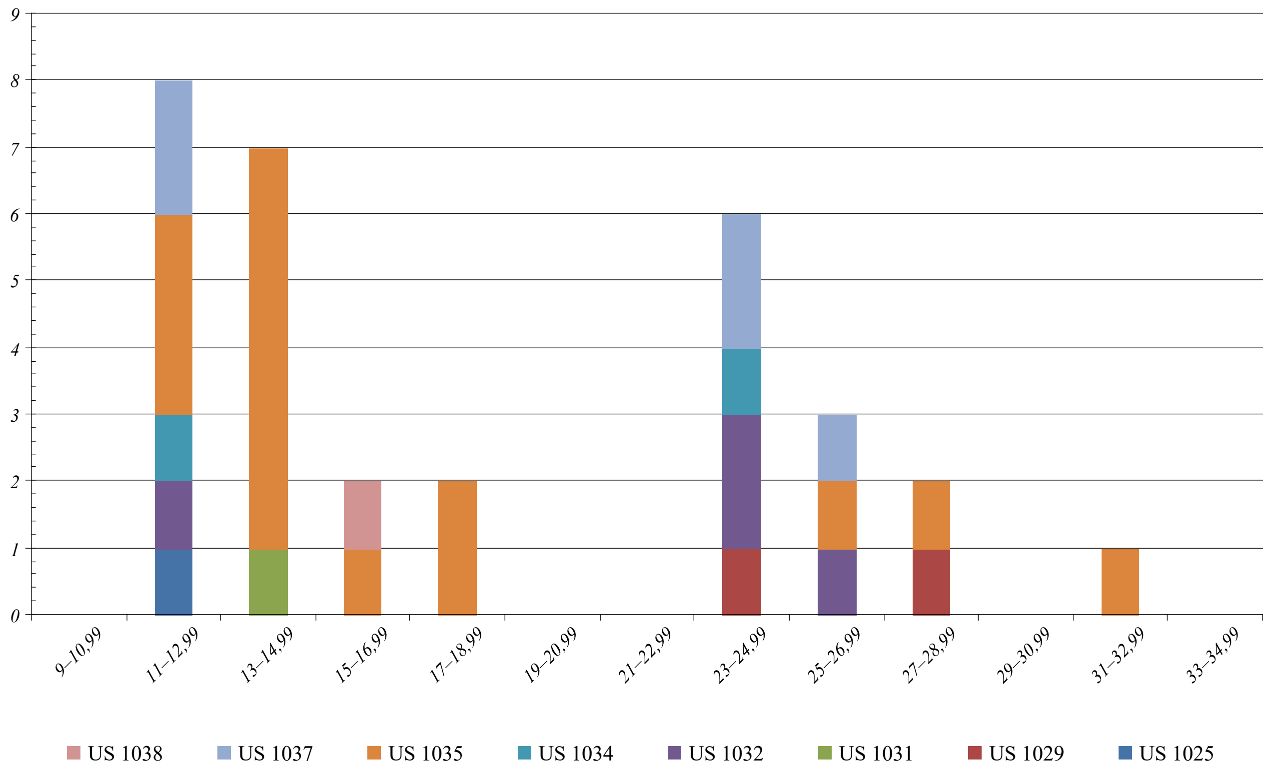


Fig. 9. Histogramme de distribution de la hauteur des récipients, toutes US (K. Peche-Quilichini)

Fig. 9. Histogram of container height distribution, all US (K. Peche-Quilichini)

diamètre (car l'ajout de l'anse aplatit le cintre dans le cas de pose du dispositif sur vase humide ou semi-sec).

Malgré ces biais, 363 rebords ont fait l'objet d'une estimation du diamètre à l'ouverture (pour près de 1000 tessons labiaux). L'étalement se fait entre 11 cm (US 1031) et 42 cm (US 1035). La distribution est normale, avec un pic entre 20,5 et 26,5 cm, qui représente près de 52 % des mesures (fig. 7). Les valeurs restent hautes en périphérie du pic, soit entre 17,5 et 30,5 cm. En conséquence, il existe très peu de récipients dont le diamètre à l'ouverture est inférieur à 15 cm ou supérieur à 33 cm. On souligne qu'il n'y a pas de corrélation directe entre l'épaisseur de la paroi (mesurée au niveau du rebord) et le diamètre de l'ouverture : des vases à paroi très fine peuvent ainsi présenter des diamètres importants et réciproquement.

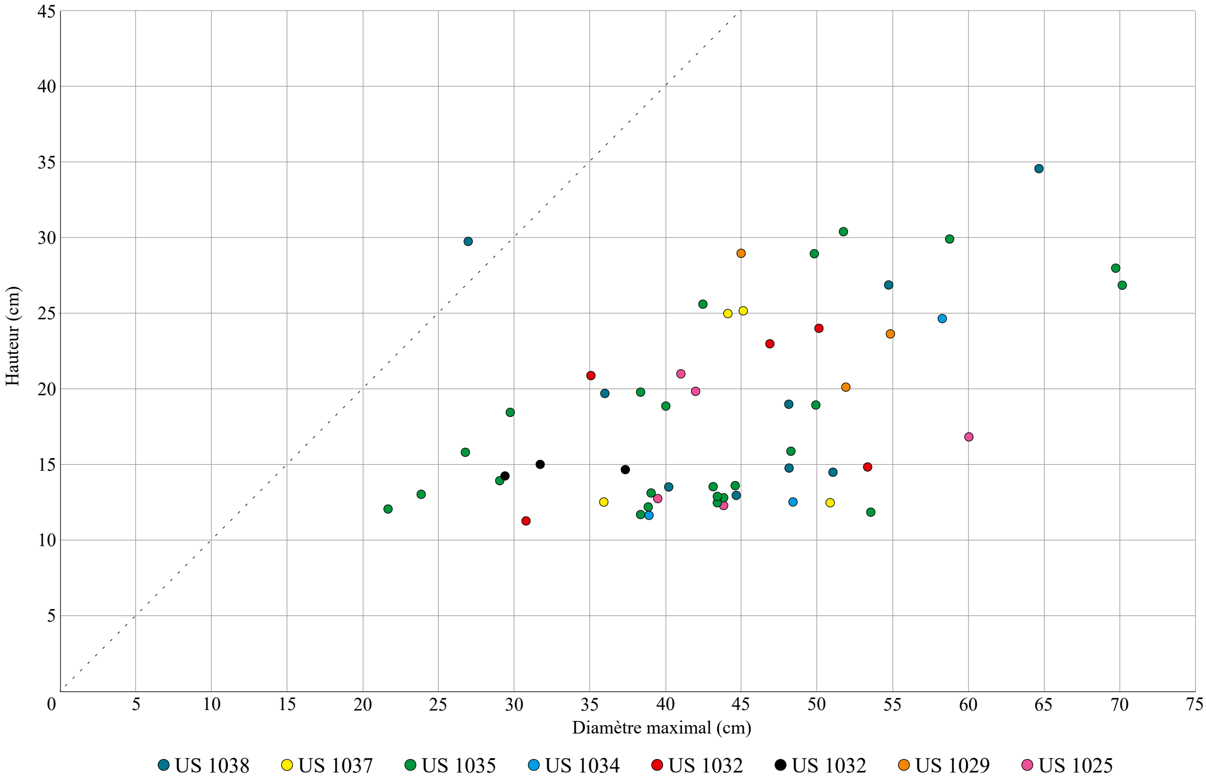


Fig. 10. Rapport hauteur/diamètre maximal (cm) par US (K. Peche-Quilichini)

Fig. 10. Height/maximum diameter (cm) ratio per US (K. Peche-Quilichini)

Les diamètres à la panse analysés lors de l'enquête de 1958–1959, avec un spectre compris entre 25 et 35 cm, illustrent une bonne superposition avec nos ensembles puisque les diamètres à l'ouverture déduits peuvent être estimés entre 22 et 32 cm[57].

Diamètre du fond

Le diamètre du fond est estimé à partir du cintre horizontal de la base. Les asymétries parfois constatées peuvent contrarier les analyses de distribution des classes. Dans l'ensemble, il faut toutefois signaler que les irrégularités sont moins importantes que pour les diamètres à l'ouverture ou sur la panse, probablement car la réalisation du fond se fait lors de la première étape de la chaîne opératoire, sans contrainte de poids ou de séchage.

Ce sont 240 mesures qui ont été obtenues, toutes US confondues, pour environ 650 tessons basaux. L'étalement se fait entre 10 cm (US 1038) et 36 cm (US 1035). La distribution est normale, avec un pic entre 17,5 et 23,5 cm, qui représente près de 47 % des mesures (fig. 8). Les valeurs restent hautes en périphérie du pic, entre 14,5 et 26,5 cm. Des valeurs très basses ou très hautes aplatissent la courbe en ses deux extrémités. On note qu'il n'y a pas de corrélation particulière entre l'épaisseur et le diamètre du fond.

Hauteur du récipient

Il a été possible de déterminer des mesures de hauteur sur 56 récipients présentant un profil complet, dont 15 (+ 9 dont la hauteur est estimée) dans la seule US 1035. L'étude fait apparaître deux groupes de vases (fig. 9) : le premier est formé de ceux hauts de 11 à 19 cm, le second de ceux hauts de 23 à 29 cm. L'intégration des observations morphologiques permet d'observer que la première catégorie est en fait composée de deux groupes : des formes basses (entre 11 et 15 cm de hauteur) et des gobelets (entre 16 et 19 cm de hauteur). La seconde catégorie inclut toutes sortes de marmites ansées.

[57] Chiva, Ojalvo 2013, appendice 4.

Le nuage de points montrant la corrélation entre hauteur et diamètre maximal (fig. 10) montre qu'il existe une valeur-plancher pour les hauteurs, fixée à près de 11 cm. Un seul vase, un pot de l'US 1038 (Pl. X, n° 1), est plus haut que large. Les diamètres maximaux s'échelonnent entre 22 et 70 cm, avec des valeurs majoritaires entre 35 et 53 cm. Aucune discrimination stratigraphique spécifique n'est exprimée par le nuage de points.

Les hauteurs fournies lors de l'enquête de 1958–1959, avec un spectre compris entre 8,5 et 36 cm et des classes réparties comme à L'Osari, illustrent une bonne superposition de ces séquences modernes et subcontemporaines[58].

LES FORMES

Généralités

La plupart des formes, notamment les plus basses, appartiennent à des récipients de structure cylindrique à paroi plus ou moins galbée, dont la partie supérieure est parfois infléchie par l'adjonction d'un épaulement et/ou d'un col. Ce dernier peut être convergent, droit ou divergent. Dans l'ensemble, les formes fermées dominent. Quelques vases ouverts, coniques ou plus rarement hémisphériques, sont également présents. Le diamètre à l'ouverture est le plus souvent légèrement supérieur au diamètre du fond, même si c'est le diamètre au tiers supérieur qui est souvent le diamètre maximal. Les vases plus hauts que larges sont très rares (un cas dans l'US 1038 – voir *supra* – , un autre possible dans l'US 1035). Les récipients dotés d'une anse de panier sont généralement ceux dotés d'un rebord convergent (articulé ou non par un col) ou droit, même si ceux à rebord ouvert peuvent également supporter ce type de dispositif, notamment lorsque leur diamètre orificiel est inférieur à 20 cm. Ce constat est clairement lié à un souci d'efficacité du collage entre le bord et l'anse, beaucoup plus assurée lorsque le bord présente une orientation parallèle au départ de l'anse. Dans le cas d'adjonction d'une anse sur un col divergent, l'arc de l'anse prend une forme outrepassée[59] dont la solidité n'est assurée que par le gabarit moindre du récipient. Un petit vase de l'US 1031 illustre particulièrement bien ce principe. Quelques vases percés avant ou après cuisson, en excluant les perforations liées à une réparation de type suture, sont vraisemblablement liés à des fonctions spécifiques, primaires ou secondaires.

Insertion chronologique préliminaire

Les origines des vaisselles modelées corses d'époque moderne

Dans son article de 2007, D. Istria[60] évoque la genèse des assemblages céramiques d'époque tardo-médiévale et moderne du nord de la Corse : « les ustensiles caractéristiques des XIIe et XIIIe siècles[61] disparaissent complètement vers la première moitié du XIVe siècle[62] et laissent la place à des formes nouvelles parmi lesquelles domine la marmite à anse de panier ». Force est de constater que ce type de profil constitue encore une catégorie très bien représentée durant l'occupation de la tour littorale de L'Osari bien que les productions modernes présentent la plupart du temps un rebord rentrant, à la différence de celles de la fin du Moyen Âge[63], souvent caractérisées par leur col évasé[64]. Les *testi* constituent l'autre grande catégorie de récipients de la fin du Moyen Âge toujours présente au début du XVIIe siècle à L'Osari. D. Istria signale aussi une diminution générale de l'épaisseur des parois (pour finalement atteindre 3 à 4 mm) entre le XIIIe et le XVe siècle, ce qui est à nouveau en cohérence avec la série décrite ici. Quelques formes, très fréquentes au XIVe siècle, comme la marmite à bord déversé[65] sont ici totalement absentes de même que les *conche* à anses intérieures[66].

D. Istria[67] mentionne également l'apparition plus tardive, durant l'époque moderne, de nouvelles classes de récipients. La plupart d'entre elles étant absentes à L'Osari, on peut logiquement supposer une formation

[58] Chiva, Ojalvo 2013, appendice 4.

[59] Le principe architectonique de report des poussées est d'ailleurs le même que pour les arcs gothiques.

[60] Istria 2007, 43–44.

[61] Notamment les moules à galettes (*i testi, i testelli*).

[62] Il précise plus loin : « quant aux raisons qui ont conduit à cette innovation dans le courant du XIVe siècle, elles sont encore bien difficiles à appréhender. Peut-être que l'ouverture de la Corse sur le monde méditerranéen et l'évolution des modes alimentaires y ont partiellement contribué » (Istria 2007, 48).

[63] « Quelques remarques s'imposent pour les marmites à anse de panier. En effet, certaines caractéristiques morphologiques semblent différencier les récipients du XIVe et ceux des XVe et XVIe siècles. Ces différenciations se situent essentiellement au niveau du bord qui apparaît sur les exemplaires les plus récents, très court et droit ou incliné vers l'intérieur » (Istria 1993, 83).

[64] Istria 1993, fig. 1, n° 6.

[65] Istria 1993, fig. 1, n° 1–5.

[66] Istria 1993, fig. 2, n° 2.

[67] Istria 2007, 44.

du dépotoir avant la diffusion de ces profils au XVIIe siècle. Ces nouveaux types sont ceux que l'on retrouve moins de trois siècles plus tard, durant l'enquête de 1958–1959.

En l'état des données, le contexte offrant le plus d'affinité avec la séquence de L'Osari est le Bastion Saint-Georges d'Algajola[68], dont le lot de vaisselles modelées est daté de la seconde moitié du XVIe siècle grâce aux nombreuses poteries d'importation.

La perduration des vaisselles modelées d'époque moderne durant l'ère subcontemporaine

Les formes répertoriées à L'Osari sont pour certaines encore présentes dans le répertoire établi en 1958–1959[69]. Il faut toutefois nuancer ces analogies :

– la marmite cylindro-sphérique (*a pignata, a pignula, a pinghjula*) à anse de panier, dont le rebord peut être convergent, droit ou divergent, est de loin le récipient le mieux représenté à L'Osari. C'est également le cas pour le nord de la Corse au début du XXe siècle[70], même si cette fréquence est un peu atténuée par une plus grande diversité des catégories de pots ;

– le plat haut (*u tianu*) ou plus bas (*u testu*) distribué dans tous les contextes à L'Osari est toujours présent au XXe siècle[71], mais il est alors le plus souvent doté d'une paire d'anses en opposition diamétrale. Certains portent même une anse de panier comme à L'Osari[72]. Les auteurs notent que ces vases servaient à torréfier le café et portent alors le nom de *frissoghje*, ce qui est difficilement envisageable pour notre tour littorale ;

– les récipients hémisphériques à anse en boudin ne sont pas représentés au XXe siècle. Ils se rapprochent néanmoins des pots à anse double[73] ;

– les vases à fond perforé peuvent être comparés aux grilloirs à châtaignes (*u caldarustu*), aux réchauds à braise (*i furnelli*), aux enfumoirs, aux faisselles ou aux passoires décrits pour le début du XXe siècle[74] ;

– toutes les autres formes subcontemporaines, plus élaborées en termes de profil, sont absentes à L'Osari.

Les gabarits présentent quant à eux des similitudes tout à fait convaincantes, illustrant une forte tradition d'ordre essentiellement fonctionnel.

Les formes de la vaisselle de L'Osari : distribution par contexte

Les considérations d'ensemble peuvent être approfondies par un examen mené sur les différents contextes stratigraphiques et sur un NMI global de 801 individus[75].

US 1025

L'US 1025 a livré un NR de 59 tessons pour un NMI de 14 récipients (Pl. I) :

– 1 (7,14 %) est un plat haut à paroi galbée (Pl. I, n° 1),
– 1 (7,14 %) est une jatte tronconico-hémisphérique (Pl. I, n° 2),
– 1 (7,14 %) est un grand plat tronconique (Pl. I, n° 3),
– 5 (35,71 %) sont des marmites à bord convergent (Pl. I, n° 6–8),
– 3 (21,42 %) sont des marmites à col droit (Pl. I, n° 4 et 5),
– 1 (7,14 %) est une marmite à col divergent (Pl. I, n° 9).

Au moins 5 vases (35,71 %) de cette série portent une anse de panier.

US 1029

L'US 1029 a livré un NR de 142 tessons pour un NMI de 23 récipients (Pl. II) :

– 2 (8,7 %) sont des jattes tronconico-hémisphériques,
– 2 (8,7 %) sont des plats hauts à paroi droite ou galbée
– 1 (4,35 %) est une marmite ovoïde (Pl. II, n° 1),
– 5 (21,73 %) sont des marmites à col convergent (Pl. II, n° 2),
– 4 (17,39 %) sont des marmites à col droit (Pl. II, n° 3 et 4),
– 3 (13,04 %) sont des marmites à col divergent (Pl. II, n° 5 et 6).

Au moins 2 vases (8,7 %) de cette série portent une anse de panier.

---

[68] Istria, Marchesi 1994, fig. 2, n° 1–7.

[69] Chiva, Ojalvo 2013, 27–31.

[70] Chiva, Ojalvo 2013, fig. 2.

[71] Chiva, Ojalvo 2013, fig. 6.

[72] Chiva, Ojalvo 2013, fig. 10.

[73] Chiva, Ojalvo 2013, fig. 4.

[74] Chiva, Ojalvo 2013, fig. 12–14.

[75] Si l'on se base sur les estimations de l'enquête ethnographique de 1958–1959 (Chiva, Ojalvo 2013), une famille de potiers fabriquait entre 20 et 25 vases par semaine, soit entre 500 et 700 vases à l'année car la saison de production durait près de six mois. Le lot de L'Osari fournirait donc un équivalent/temps à près de 35 semaines de travail pour un atelier moyen.

US 1031

L'US 1031 a livré un NR de 711 tessons pour un NMI de 133 récipients (Pl. III) :

– 17 (12,78 %) sont des jattes tronconico-hémisphériques (Pl. III, n° 1 et 2),
– 22 (16,54 %) sont des plats hauts à paroi droite ou galbée (Pl. III, n° 3–5),
– 3 (2,26 %) sont des marmites ovoïdes (Pl. III, n° 6),
– 15 (11,28 %) sont des marmites à col divergent (Pl. III, n° 7–9),
– 59 (44,36 %) sont des marmites à col convergent (Pl. III, n° 10–15),
– 10 (7,52 %) sont des marmites à col droit,
– 1 (0,75 %) est un petit vase à col divergent (Pl. III, n° 16).

Au moins 22 vases (16,54 %) de cette série portent une anse de panier.

US 1032

L'US 1032 a livré un NR de 660 tessons pour un NMI de 124 récipients (Pl. IV) :

– 7 (5,65 %) sont des plats hauts à profil sinueux (Pl. IV, n° 1 et 2),
– 1 (0,81 %) est une jatte tronconico-hémisphérique,
– 2 (1,61 %) sont des plats hauts à paroi droite ou galbée,
– 6 (4,84 %) sont des marmites ovoïdes (Pl. III, n° 3),
– 40 (32,26 %) sont des marmites à col convergent (Pl. IV, n° 4 et 5),
– 11 (8,87 %) sont des marmites à col droit (Pl. IV, n° 6),
– 25 (20,16 %) sont des marmites à col divergent (Pl. IV, n° 7–9).

Au moins 15 vases (12,1 %) de cette série portent une anse de panier.

US 1034

L'US 1034 a livré un NR de 329 tessons pour un NMI de 62 récipients (Pl. V) :

– 3 (4,84 %) sont des jattes tronconico-hémisphériques (Pl. V, n° 1 et 2),
– 1 (1,61 %) est un plat haut à profil sinueux,
– 5 (8,06 %) sont des plats hauts à paroi droite ou galbée (Pl. V, n° 3),
– 2 (3,23 %) sont des marmites ovoïdes,
– 19 (30,65 %) sont des marmites à col convergent (Pl. V, n° 4),
– 14 (22,58 %) sont des marmites à col droit (Pl. V, n° 5–7),
– 11 (17,74 %) sont des marmites à col divergent (Pl. V, n° 8 et 9).

Au moins 10 vases (16,13 %) de cette série portent une anse de panier.

US 1035

L'US 1035 a livré un NR de 1622 tessons pour un NMI de 215 récipients (Pl. VI–VIII) :

– 11 (5,12 %) sont des jattes tronconico-hémisphériques (Pl. VI, n° 1 et 2),
– 5 (2,33 %) sont des jattes à profil sinueux (Pl. VI, n° 3),
– 17 (7,91 %) sont des jattes cylindriques (Pl. VI, n° 4–10),
– 1 (0,47 %) est un pot hémisphérique monoansé (Pl. VI, n° 11),
– 1 (0,47 %) est un plat haut à profil sinueux,
– 25 (11,63 %) sont des plats hauts à paroi droite ou galbée (Pl. VI, n° 12–19),
– 8 (3,72 %) sont des plats hauts tronconiques (Pl. VI, n° 20–22),
– 10 (4,65 %) sont des marmites ovoïdes (Pl. VII, n° 1),
– 2 (0,93 %) sont des jarres ovoïdes à col droit (Pl. VII, n° 2),
– 27 (12,56 %) sont des marmites à col convergent (Pl. VII, n° 3–11),
– 36 (16,74 %) sont des marmites à col droit (Pl. VII, n° 12–23),
– 22 (10,23 %) sont des marmites à col divergent (Pl. VIII, n° 1–7),
– 2 (0,93 %) sont des éléments constituant le fond d'un vase perforé avant cuisson (Pl. VIII, n° 8 et 9).

Au moins 39 vases (18,14 %) de cette série portent une anse de panier.

US 1037

L'US 1037 a livré un NR de 233 tessons pour un NMI de 50 récipients (Pl. IX) :

– 2 (4 %) sont des jattes tronconico-hémisphériques,
– 1 (2 %) est un plat haut à profil sinueux,
– 2 (4 %) sont des plats hauts à paroi droite ou galbée (Pl. IX, n° 1),
– 3 (6 %) sont des plats hauts tronconiques (Pl. IX, n° 2 et 3),
– 5 (10 %) sont des marmites ovoïdes (Pl. IX, n° 3–6),

- 9 (18 %) sont des marmites à col convergent (Pl. IX, n° 7–8),
- 11 (22 %) sont des marmites à col droit (Pl. IX, n° 9–11),
- 8 (16 %) sont des marmites à col divergent (Pl. IX, n° 12–15).

Au moins 8 vases (16 %) de cette série portent une anse de panier.

US 1038

L'US 1038 a livré un NR de 464 tessons pour un NMI de 77 récipients (Pl. X) :

- 1 (1,3 %) est un pot cylindrique à paroi galbée (Pl. X, n° 1),
- 1 (1,3 %) est une jatte tronconico-hémisphérique,
- 5 (6,49 %) sont des plats hauts à paroi droite ou galbée (Pl. X, n° 2),
- 13 (16,88 %) sont des marmites ovoïdes (Pl. X, n° 3–10),
- 16 (20,78 %) sont des marmites à col convergent (Pl. X, n° 11 et 12),
- 12 (15,58 %) sont des marmites à col droit (Pl. X, n° 13–18),
- 8 (10,39 %) sont des marmites à col divergent (Pl. X, n° 19),
- 1 (1,3 %) est élément constituant la partie basse d'un vase transformé en faisselle ou passoire après cuisson (Pl. X, n° 20).

Au moins 10 vases (12,99 %) de cette série portent une anse de panier.

Représentativité des catégories de récipients

Afin d'évaluer la fréquence relative des différentes catégories de récipients au sein de l'assemblage, nous avons retenu les six US les plus numériquement fournies et les six formes les mieux représentées (fig. 11), d'ailleurs présentes dans chacune des US retenues. L'analyse permet d'observer en premier lieu une nette prédominance des marmites à col (ansées ou non), qui constituent en fait probablement trois variantes d'une même catégorie. Dans tous les contextes, ces types représentent près de la moitié des vases. Parmi les tendances évolutives significatives, l'ensemble des US 1037/1038 est caractérisé par une fréquence haute de marmites ovoïdes, ce qui pourrait trahir un *trend* fonctionnel. Une autre mutation notable s'observe dans un possible développement des cols convergents au détriment des cols droits (alors que le taux de cols divergents reste stable).

CONCLUSIONS : DU POT À LA POTIÈRE ET DES *TRAGULINI* AUX *TORREGIANI*

Cette étude permet de documenter une phase méconnue de l'histoire céramique insulaire, les débuts de l'époque moderne, en même temps qu'elle précise les conditions de vie au quotidien dans une tour littorale.

Les caractères technologiques et morphologiques de la poterie confirment une intégration nette aux sphères de production nord-insulaires des XIVe–XXe siècles, avec quelques spécificités chrono-fonctionnelles. L'extrême homogénéité de l'ensemble permet d'envisager que l'essentiel du lot des US caractéristiques (hors US 1037/1038) constitue une série formée à partir d'un unique centre de production, sur un laps de temps resserré. Quelques pièces montrent cependant l'existence d'autres circuits de distribution, très minoritaires. Le lot des US 1037/1038 est légèrement divergent (voir *supra*) et pourrait caractériser une phase légèrement en décalage, plutôt chronologique que fonctionnelle.

D'après I. Chiva et D. Ojavo[76], à l'époque contemporaine, « la poterie a été le fait d'un nombre restreint de villages ou hameaux spécialisés », en lien géographique avec les sources de matières premières en combinaison, à savoir les *terre rosse* et l'amiante fibreuse. En conséquence, il est vraisemblable d'imaginer un approvisionnement régulier depuis une région voisine productrice. Dans cette optique, la région de Rutali, dans le haut Nebbiu, demeure l'hypothèse la plus sérieuse. Ce secteur constitue en effet un important centre de fabrication de poterie à pâte amiantée durant les temps modernes et subcontemporains. Ce succès des ateliers du nord de l'île, reconnaissables à leur signature technique matérialisée par la présence d'amiante, aurait même, autour du XVIe siècle, entrainé la disparition des officines dispersées dans le reste de l'île[77]. Dans le détail, à plusieurs reprises, les ethnographes[78] affirment que la production (comprendre la phase de façonnage) des vaisselles est « essentiellement féminine et se transmet de mère en fille » ou entre belles-sœurs[79]. À noter que les mêmes femmes fabriquent

[76] Chiva, Ojalvo 2013, 21.

[77] Istria 2007, 45.

[78] Chiva, Ojalvo 2013, 22–25.

[79] Tout en précisant que la collecte des matériaux est une activité plutôt masculine (Chiva, Ojalvo 2013, 23). La vente et la distribution des produits finis est aussi assurée par les hommes.

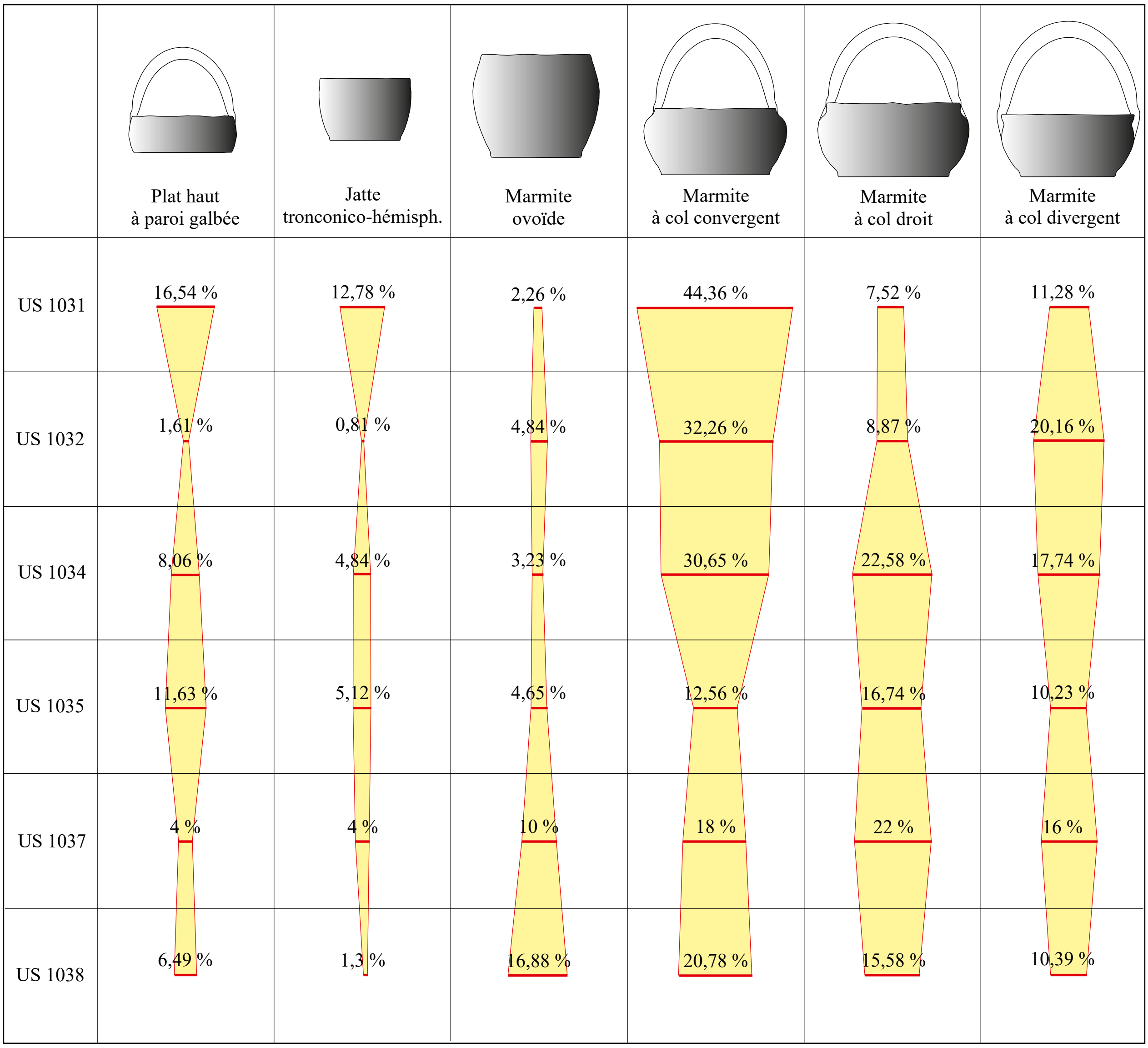


Fig. 11. Ichtyogramme de fréquence des 6 principales catégories de récipients dans les 6 US les plus fournies (K. Peche-Quilichini)

Fig. 11. Ichtyogram of frequency of the 6 main categories of containers in the 6 most supplied US (K. Peche-Quilichini)

aussi les récipients en vannerie/sparterie[80], s'attribuant ainsi un statut de spécialistes des ustensiles liés à la cuisine et à la contenance. La distribution des biens manufacturés se faisait alors en Corse par l'intermédiaire des *tragulini*, des marchands itinérants accompagnés de leur mule bâtée. L'acquisition de la poterie devait donc se faire cycliquement lors de leur passage à L'Osari ou à Belgodère. La prise en compte globale des analyses des différences étapes de l'approvisionnement en matériaux, de la chaîne opératoire de façonnage, mais possiblement aussi de l'organisation de cette production, permet au final d'observer assez clairement le caractère artisanal et surtout traditionnel de ces poteries. Ces deux aspects tranchent nettement avec la plupart des tendances euro-méditerranéennes de l'époque, où ces dernières sphères de production archaïques disparaissent l'une après l'autre.

[80] Chiva, Ojalvo 2013, 22.

L'utilisation de ces vaisselles reste difficile à établir. Néanmoins, la fonction de nombre de grands récipients munis d'une anse de panier renvoie clairement à la cuisson. Il s'agirait donc pour la plupart de marmites. Dans ce cadre, il est intéressant de constater que l'anse s'est souvent détachée du corps du vase au niveau du collage, probablement lors de l'utilisation (et non de façon post-dépositionnelle). Ce phénomène mécanique est dû à un manque d'adhérence sur ce point charnière. Il devait en outre être accentué par la manipulation de vases remplis de produits semi-liquides. Il faut aussi noter que l'observation de l'intérieur de l'arc ne permet pas d'observer de traces créées par l'accroche de l'anse sur une crémaillère (*a catena*), alors que cette position est généralement évoquée pour expliquer le rôle de marmite de la plupart des récipients décrits ici. On peut donc imaginer qu'un objet intermédiaire était placé entre l'anse et le créneau (ou le crochet) métallique, voire que ces vases n'étaient pas suspendus. Dans cette hypothèse, que nous privilégions, la forme verticale de l'anse de panier limitait les conductions de chaleur[81] et facilitait avantageusement la préhension juste après la cuisson. L'observation des résidus carbonisés sur paroi externe valide ce point de vue car le côté extérieur des fonds ne présente presque jamais de traces de feu, alors que c'est cette zone qui aurait dû être le plus touchée pendant une cuisson à pot suspendu. En conséquence, on peut imaginer des cuissons lentes avec des vases positionnés latéralement au foyer. Les formes basses, quant à elles, serviraient de plats, voire de couvercles[82], alors que les vases de table sont absents du lot de poterie modelée[83] : les formes destinées à contenir des liquides, à la verse et à accueillir les aliments, plus généralement les éléments de la vaisselle de table[84], sont en effet à chercher parmi les récipients importés[85]. Ces considérations se superposent à celles proposées pour le Bastion Saint-Georges d'Algajola, un contexte géographiquement, chronologiquement et contextuellement voisin, où l'intégralité de la vaisselle culinaire (réduite à 13 % de l'effectif) est composée de marmites à anse de panier produites localement[86]. En ce sens, il semble possible, à titre d'hypothèse, d'imaginer un rôle globalement collectif pour ces vaisselles locales, alors que les productions exogènes, plus nobles, bénéficieraient plutôt d'une considération personnelle de la part des *torregiani*.

[81] L'amiante accentue probablement le phénomène.

[82] Et ce même en l'absence de dispositif de préhension.

[83] Ce fait se superpose aux observations réalisées par D. Istria (2007, 46) : « entre le XVe et le XVIIIe siècle, c'est la large diffusion de ces vases [importés] dans l'île et la rareté, voire l'absence totale, des importations de céramique culinaire, alors que les récipients destinés à la table sont extrêmement abondants, qui témoignent du poids économique de cette production locale ».

[84] Vallaury 1995.

[85] L'importation de vaisselles fabriquées dans les ateliers toscans et ligures devient très importante à partir du XIVe siècle (Istria 2007, 42).

[86] Istria, Marchesi 1994 ; Istria 2007, 45.

BIBLIOGRAPHY:

Arcelin 2014 – P. Arcelin, La vaisselle tardo-républicaine de la colonie romaine de Mariana (Lucciana, Haute-Corse). *Analyse du fonds des fouilles anciennes, in: Actualité de la recherche. Actes du premier colloque international « Mariana et la basse vallée du Golo »* (Mariana, septembre 2004), (ed.) P. Pergola. Patrimoine d'une île 2 2014, 199–220.

Arcelin, Chapon 2014 – P. Arcelin, P. Chapon, Un habitat de la fin du IIe s. av. J.-C. sur le site des Palazzi à Venzolasca (Haute-Corse), in: *Actualité de la recherche. Actes du premier colloque international « Mariana et la basse vallée du Golo » (Mariana, septembre 2004)*, (ed.) P. Pergola. Patrimoine d'une île 2 2014, 187–221.

Chiva, Ojalvo 2013 – I. Chiva, D. Ojalvo, La poterie corse à l'amiante (rééd.). *Strade* 21 2013, 21–39.

Colomban, Kremenović 2020 – P. Colomban, A. Kremenović, Asbestos-Based Pottery from Corsica: The first Fiber-Reinforced Ceramic Matrix Composite. *Materials* 13 3597 2020 doi:10.3390/ma13163597.

Duperron tbp – G. Duperron, Une production de sigillées sur le site de Sant'Appianu de Sagone (Vico, Corse) ? in: *Actes du colloque de la Société Française d'Étude de la Céramique Antique en Gaule (Reims, mai 2018)*, tbp.

Graziani 1992 – A.-M. Graziani, *Les tours littorales*, Ajaccio 1992.

Graziani 2019 – A.-M. Graziani, Les tours littorales de la Corse. Sentinelles de la mer (XVIe–XVIIIe siècles), Ajaccio 2019.

Gueymard 1883 – E. Gueymard, *Voyage géologique et minéralogique en Corse 1820–1821*, Bastia 1883.

Hulthén 1991 – B. Hulthén, On ceramic ware in northern Scandinavia during the neolithic, bronze and early iron age: A ceramic-ecological study. in: *Archaeology and Environment Series*. University of Umea 1991.

Istria 1993 – D. Istria, *Les céramiques médiévales découvertes en Corse (XIIe–XVIe s.): productions locales et importations. Mémoire de maîtrise*, Université de Provence, 1992–1993.

Istria 1995 – D. Istria, *Les céramiques modelées produites en Corse entre le XIVe et le XVIe siècle*. Patrimoine d'une île 1 1995, 79–89.

Istria 2007 – D. Istria, *L'utilisation de l'amiante en Corse du XIVe au XIXe siècle*. Médiévales 53 2007, 39–50.

Istria, Marchesi 1994 – D. Istria, H. Marchesi, Éléments pour une typologie de la céramique du XVIe siècle en Corse. Le bastion Saint-Georges à Algajola (Haute-Corse). *Archéologie du midi médiéval* 12 1994, 131–144.

Jehasse 1975 – Jehasse L., La céramique modelée d'Aléria préromaine. *Études Corses* 4 1975, 143–163.

Nordqvist 2017 – K. Nordqvist, Periodisation of the Neolithic and radiocarbon chronology of the Early Neolithic and the beginning of the Middle Neolithic in Finland. *Documenta Praehistorica* XLIV 2017, 78–86.

Pallares 1980 – F. Pallares, Terre sigillée italique et tardo-italique non décorée, in: *Les fouilles de Mariana (Corse)*, 7. Cahiers Corsica 86–87–88 1980, 2–6.

Pallecchi 2001 – P. Pallecchi, Indagini mineralogico-petrografiche sui boccali di tipologia corsa, in: *Le rotte nel Mar Tirreno. Populonia e l'emporio di Aleria in Corsica, Catalogue d'exposition, INTERREG II*, Livorno 2001, 22–23.

Paolini-Saez 2012 – Paolini-Saez H., Les productions à pâtes amiantées à l'âge du Fer: origines et évolution, in: *L'âge du Fer en Corse – Acquis et perspectives, Actes de la table ronde de Serra-di-Scopamène*, (ed.) K. Peche-Quilichini, Ajaccio 2012, 76–86.

Peche-Quilichini 2015 – K. Peche-Quilichini, Technological approach of ceramic production at the end of Iron Age at I Palazzi (northeastern Corsica). *The Old Potter's Almanack* 20 (1) 2015, 2–10.

Peche-Quilichini 2020 – K. Peche-Quilichini, Les vaisselles produites en Corse nord-orientale à l'époque hellénistique: technologie, typologie et connexions avec l'Etrurie insulaire et littorale, in: *Exploring the neighborhood. The role of ceramics in understanding place in the hellenistic world, Proceedings of the 3rd IARPotHP conference*, (ed.) I. Kamenjarin, M.Ugarković, Wien 2020, 133–143.

Peche-Quilichini Chapon 2012 – K. Peche-Quilichini, P. Chapon, La céramique non tournée de la fin du deuxième âge du Fer d'I Palazzi (Venzolasca, Haute-Corse). *Documents d'Archéologie Méridionale* 35 2012, 285–299.

Peche-Quilichini et al. 2017 – K. Peche-Quilichini, M. Rageot, M. Regert, Systèmes de réparation, de ré-utilisation et de recyclage des vaisselles protohistoriques corso-sardes. *Bulletin de la Société préhistorique française* CXIV (1) 2017, 137–166.

Piccardi, Peche-Quilichini 2013 – E. Piccardi, K. Peche-Quilichini, Production, trading and imitation of pottery in the Northern Tyrrhenian Sea area in the Second Iron Age: potential evidence of identity, in: *Identity and connectivity, Proceedings of the XVIth Symposium on Mediterranean Archaeology*, (ed.) L. Bombardieri, A. D'Agostino, G. Guarducci, V. Orsi, S. Valentini, Oxford 2013 (BAR International Series 2581), 705–714.

Vallauri 1995 – L. Vallaury, *La circulation des céramiques méditerranéennes au Moyen Age*. Patrimoine d'une île 1 1995, 69–77.

Vallauri, Marchesi 2000 – L. Vallaury, H. Marchesi, Le marché de la céramique en Corse du Moyen Age à l'époque moderne : une tradition d'ouverture, in: *Savoir et savoir-faire industriels en Méditerranée occidentale – XVIe–XXe siècles*. Colloque international méditerranéen, Corté 2000, 69–79.

Weiss 1974 – M.C. Weiss, La station de Modria à la fin du premier millénaire avant notre ère. *Bulletin de la Société des Sciences Historiques et Naturelles de la Corse* 613 1974, 9–37.

Kewin PECHE-QUILICHINI
Les vaisselles produites dans le nord de la Corse vers 1600 apr. J.-C. : l'exemple de la tour littorale de L'Osari (301–336)

Summary: KEWIN PECHE-QUILICHINI, Museum of Alta Rocca – Levie, Territorial government of Corsica
"Archaeology of Mediterranean Societies" UMR 5140 Paul-Valery University, LabEx ARCHIMEDE, MCC-CNRS, Montpellier

LOCALLY PRODUCED NORTHERN CORSICA VESSELS OF AROUND 1600 AD: EXAMPLE FROM THE COASTAL TOWER OF L'OSARI (BELGODÈRE, HAUTE-CORSE)

Keywords. – Corsica, modern era, coastal tower, local non-wheeled pottery, technology, typology

The article consists of a study of locally produced vessels discovered during the excavation of the coastal tower of L'Osari (Belgodère, Haute-Corse) in 2015, under the direction of L. Vidal (Inrap). This monument, dedicated to maritime surveillance in the face of the constant threat of Ottoman piracy at the time, is located on a rocky coast in northern Corsica and belongs to a network of buildings (around a hundred) of the same type built along the coast of the whole island between 1530 and 1700. Excavations have brought to light numerous remains attesting to the daily life of the guards (*torregiani*) occupying the tower.

The dishes are largely made up of imported pottery from various workshops, mostly Italian, and some locally produced. The latter is characterised by its manufacturing features: it is non-wheeled and degreased with asbestos. In this sense, it is part of a tradition dating back to the late Middle Ages or even older. The study concerns this category of vessels.

It first focuses on the *chaine opératoire* and uses the results of experimental approaches to clarify certain aspects. It was, thus, possible to determine that the vases were produced from the bottom, using a method involving the superimposition of clay strips, previously flattened with a roller. A particular technical point exists in the way in which the typical basket handle was hung. The use of asbestos, a resource present nearby, as a degreasing raw material, is explained by an improvement in the mechanical and thermal solidity of the vases. This was a Corsican tradition already observed during the Iron Age and which experienced a revival between the end of the Middle Ages and the 20th century.

We then present a morphometric assessment based on the opening, the bottoms, the walls and the handles, intended to provide a reference for comparison of ceramic sequences discovered in the future. This is followed by a typological analysis of the shape repertoires and a study of their relative distribution. The most frequent vases are cooking pots (*pignule*) with a basket handle, a form that appeared on the island two centuries earlier. Low forms (*testi* and *tiani*) are also very common.

The study also reveals certain functional aspects of this coarse looking production, complementary to the use of imported pottery. This point is underlined by the absence of locally produced tableware, which can be explained by the greater importation of this category of small containers. The identification (or not) of traces of use has also shown that the use of cooking pots with handles on racks is not a certainty, in spite of historiographical considerations to this effect.

The contextualisation highlights the interest of the sequence, which can be considered a reference set for the period between the end of the 16th and the beginning of the 17th century in northern Corsica.

In conclusion, hypotheses are put forward on the ways in which the occupants of the tower were supplied with locally produced vases and on the culinary functioning in force in these buildings, which are characteristic of the modern period in Corsica.

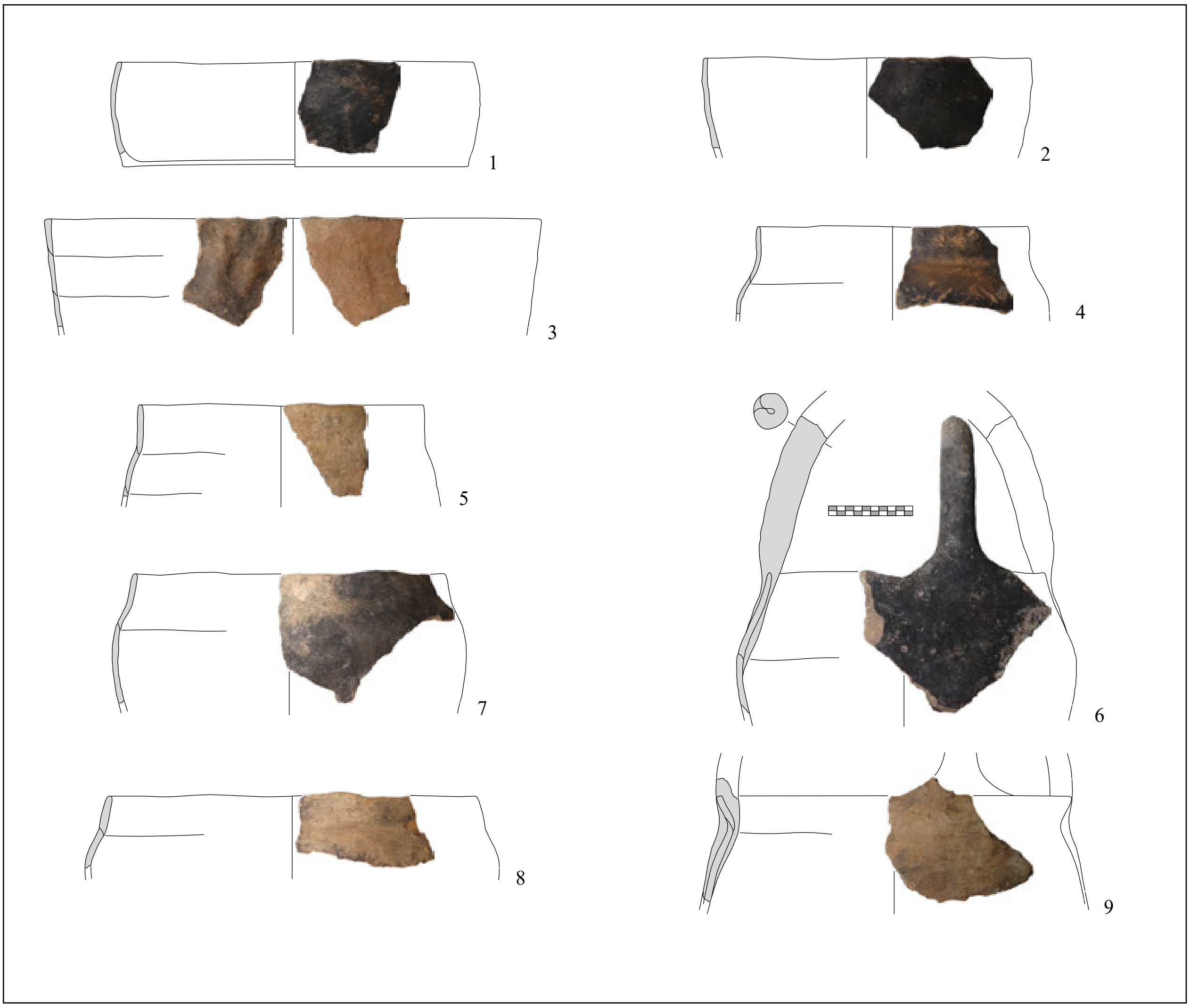


Planche I – Panel de formes de l'US 1025 (K. Peche-Quilichini)

Plate I – US 1025 shapes panel (K. Peche-Quilichini)

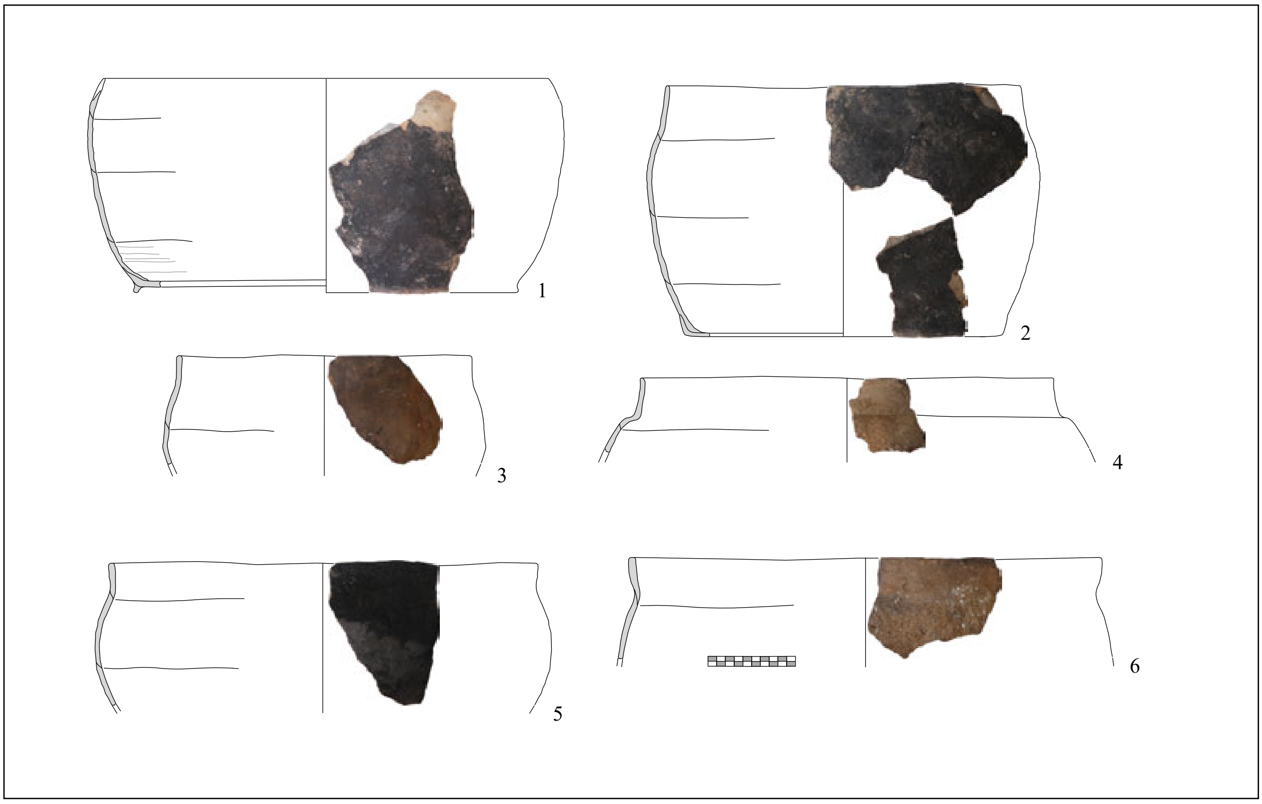


Planche II – Panel de formes de l'US 1029 (K. Peche-Quilichini)

Plate II – US 1029 shapes panel (K. Peche-Quilichini)

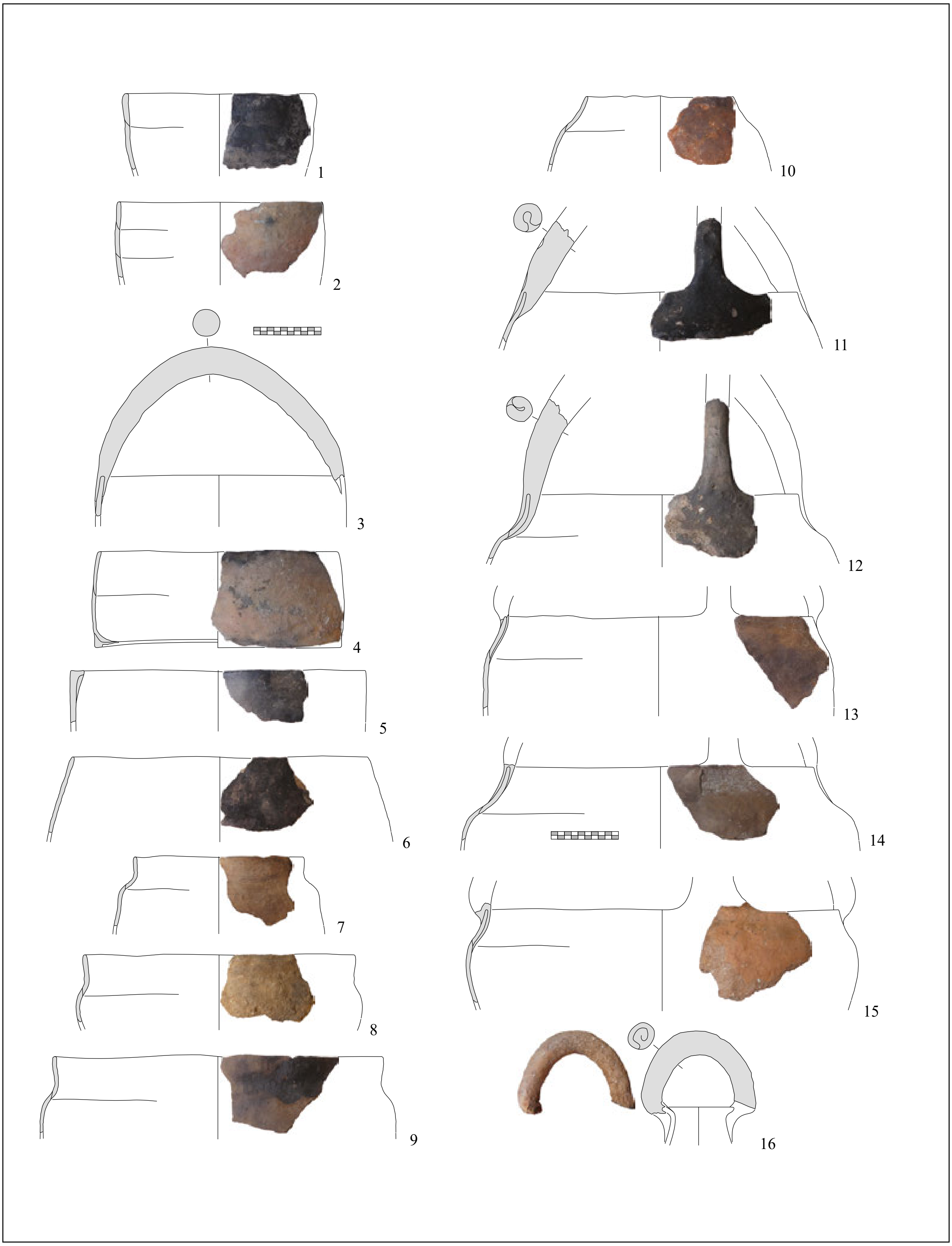


Planche III – Panel de formes de l'US 1031 (K. Peche-Quilichini)

Plate III – US 1031 shapes panel (K. Peche-Quilichini)

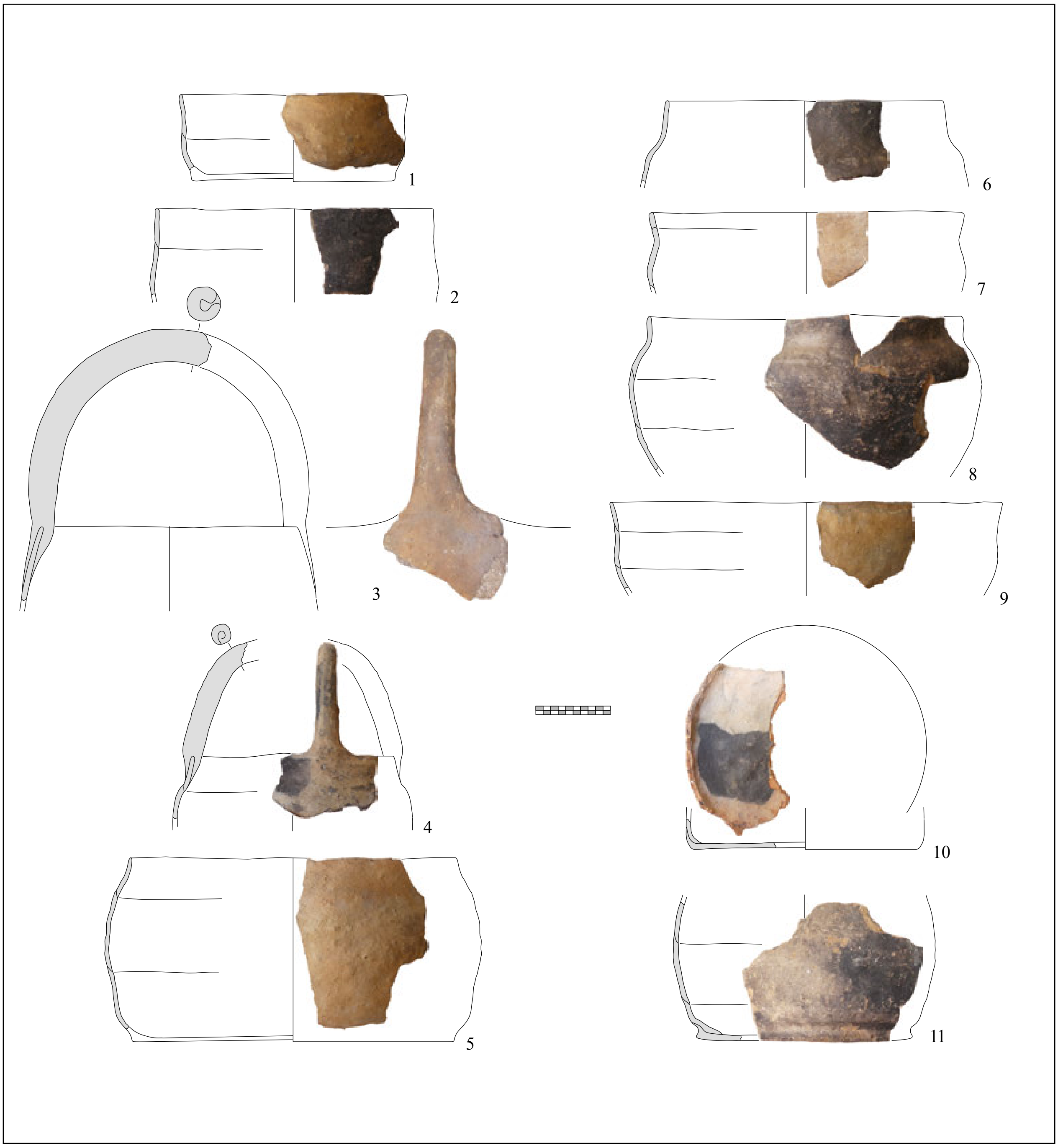


Planche IV – Panel de formes de l'US 1032 (K. Peche-Quilichini)

Plate IV – US 1032 shapes panel (K. Peche-Quilichini)

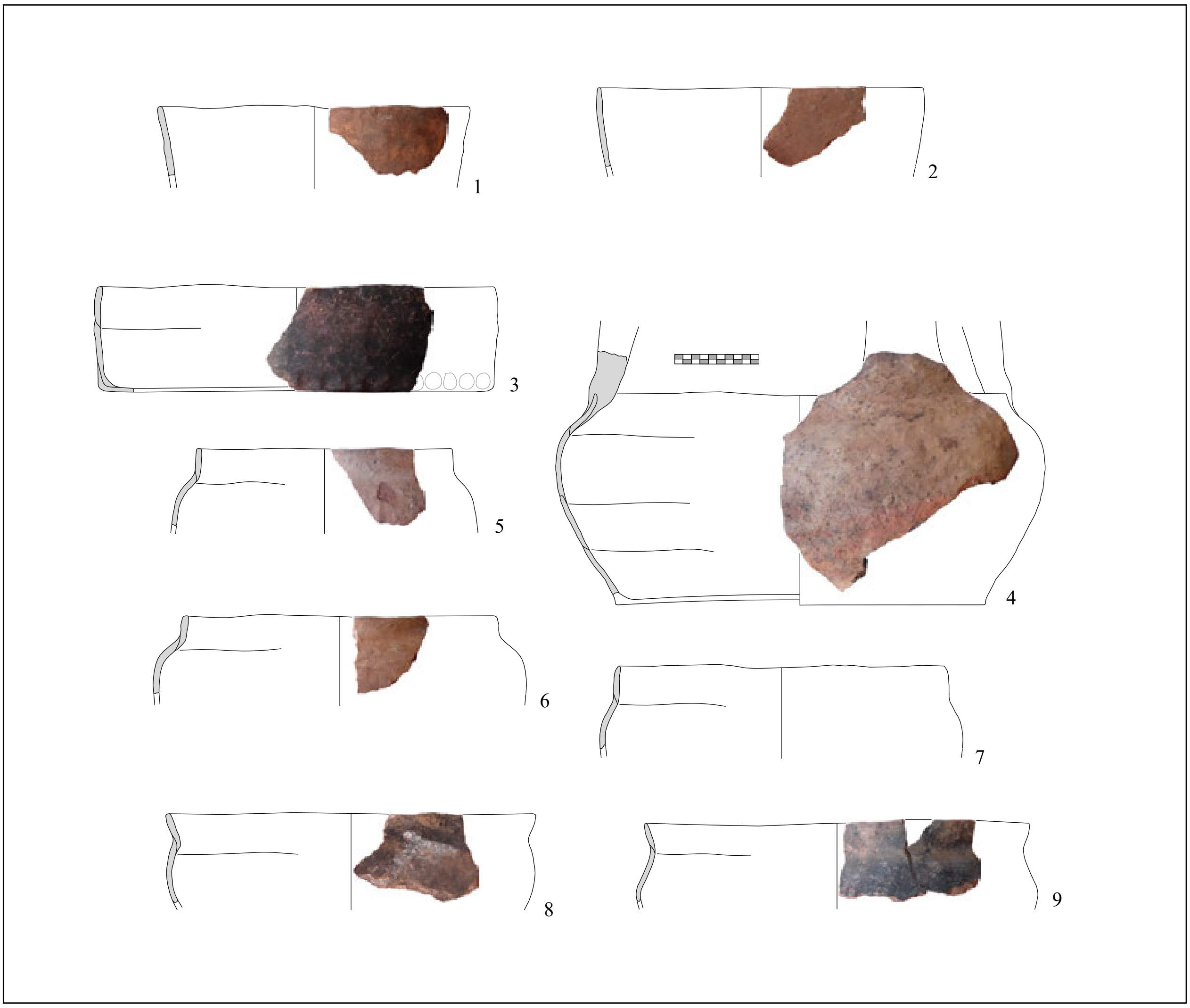


Planche V – Panel de formes de l'US 1034 (K. Peche-Quilichini)

Plate V – US 1034 shapes panel (K. Peche-Quilichini)

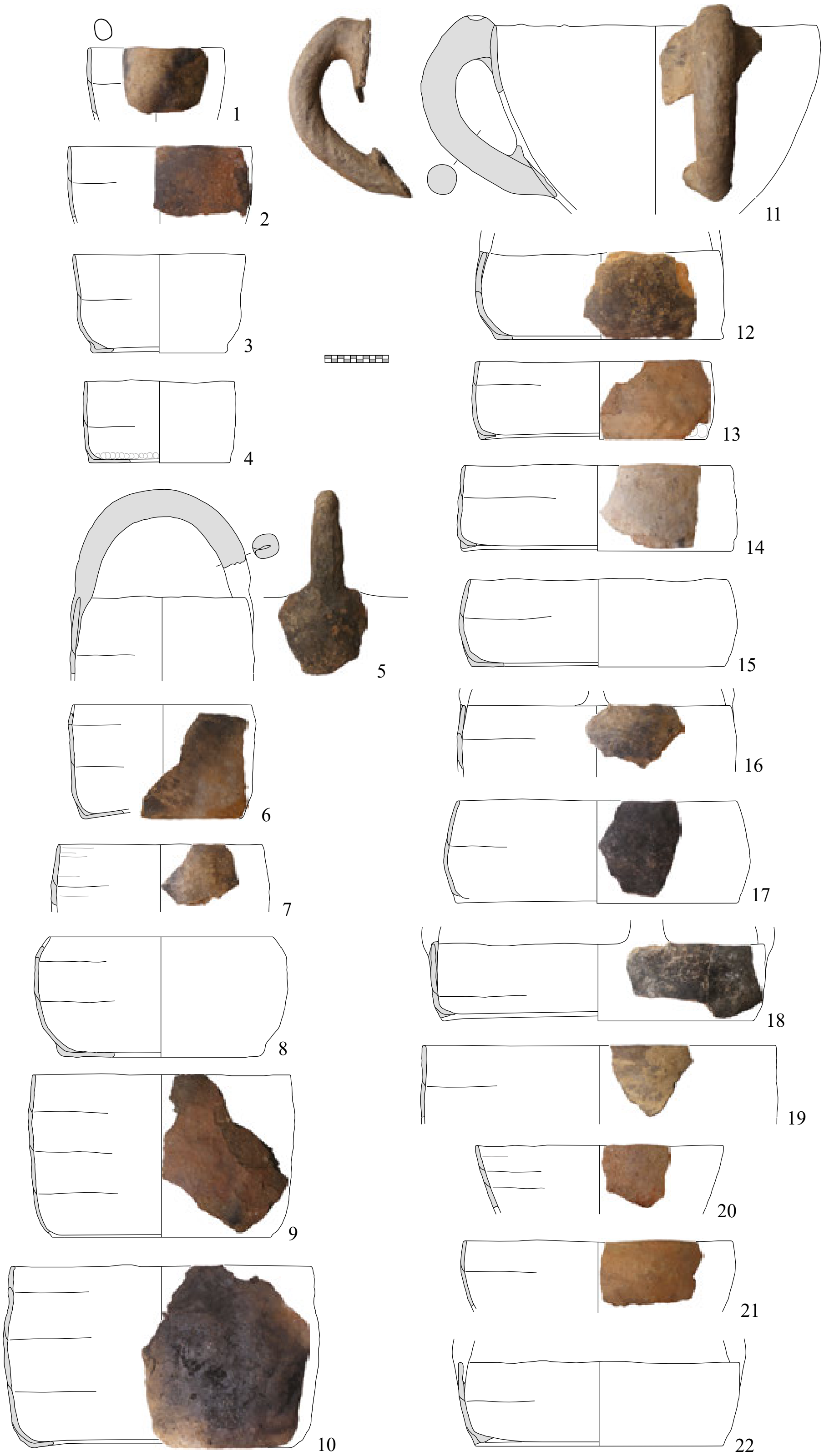


Planche VI – Panel de formes de l'US 1035 (K. Peche-Quilichini)

Plate VI – US 1035 shapes panel (K. Peche-Quilichini)

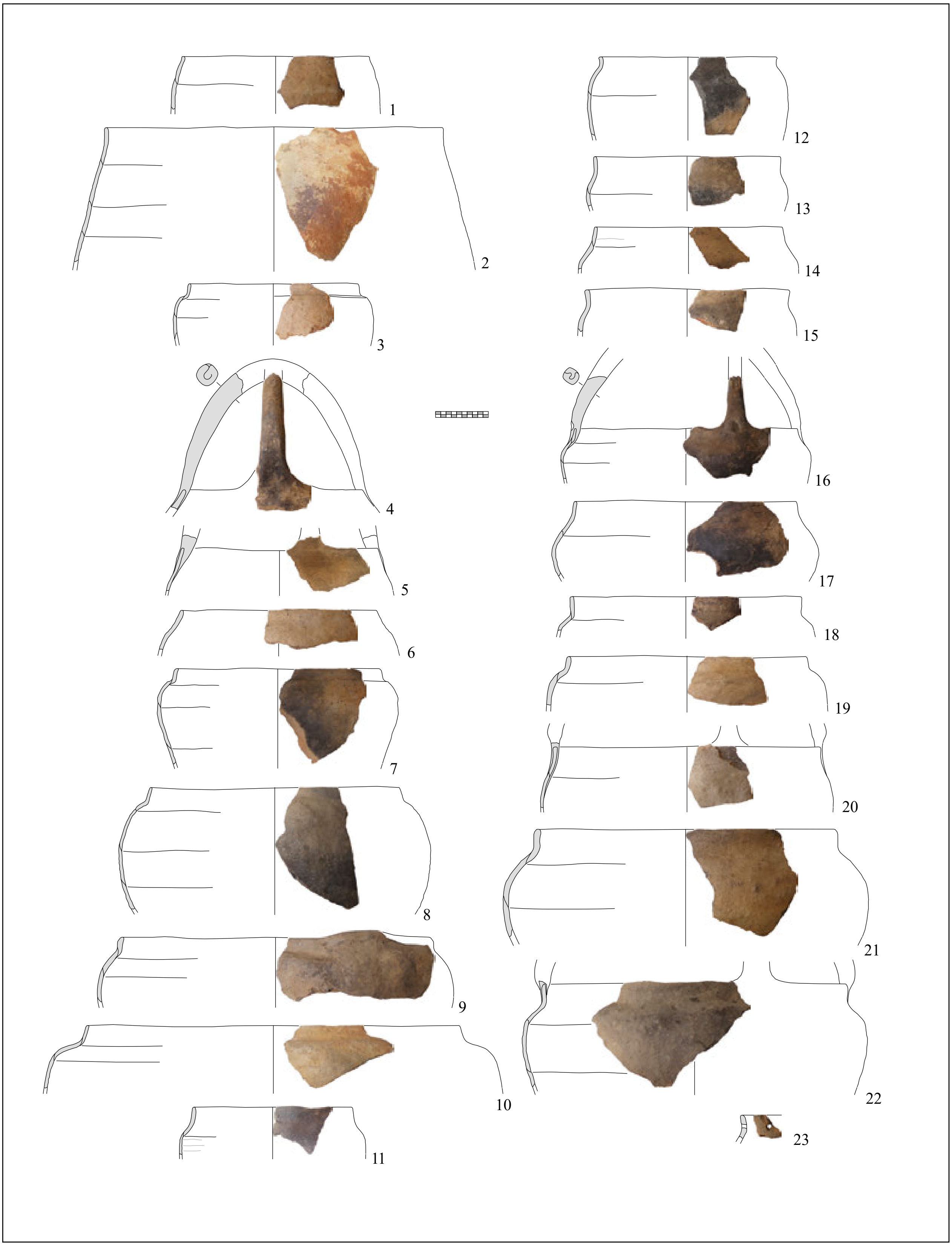


Planche VII – US 1035 shapes panel (K. Peche-Quilichini)

Plate VII – Panel de formes de l’US 1035 (K. Peche-Quilichini)



Planche VIII – Panel de formes de l'US 1035 (K. Peche-Quilichini)

Plate VIII – US 1035 shapes panel (K. Peche-Quilichini)

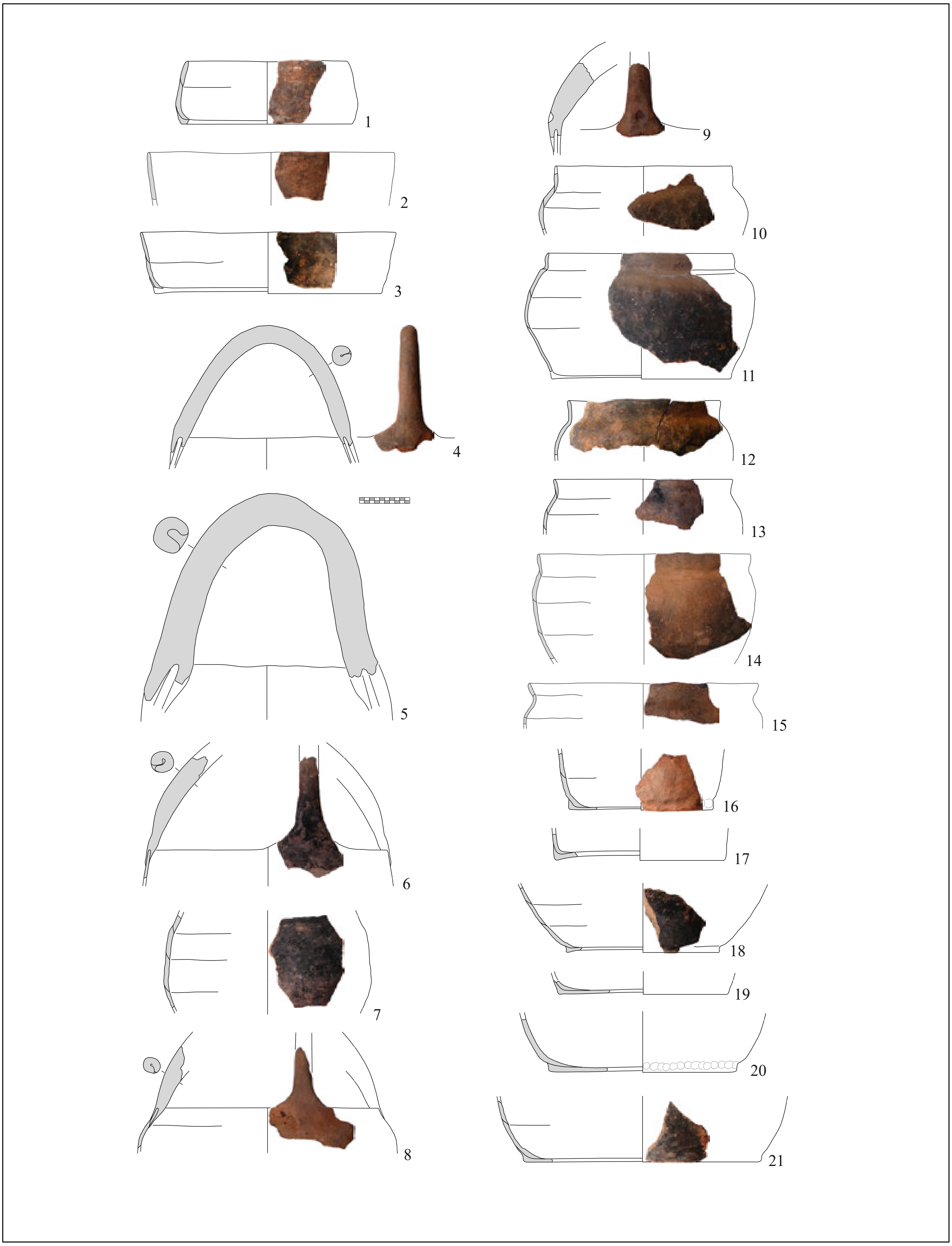


Planche IX – Panel de formes de l'US 1037 (K. Peche-Quilichini)

Plate IX – US 1037 shapes panel (K. Peche-Quilichini)

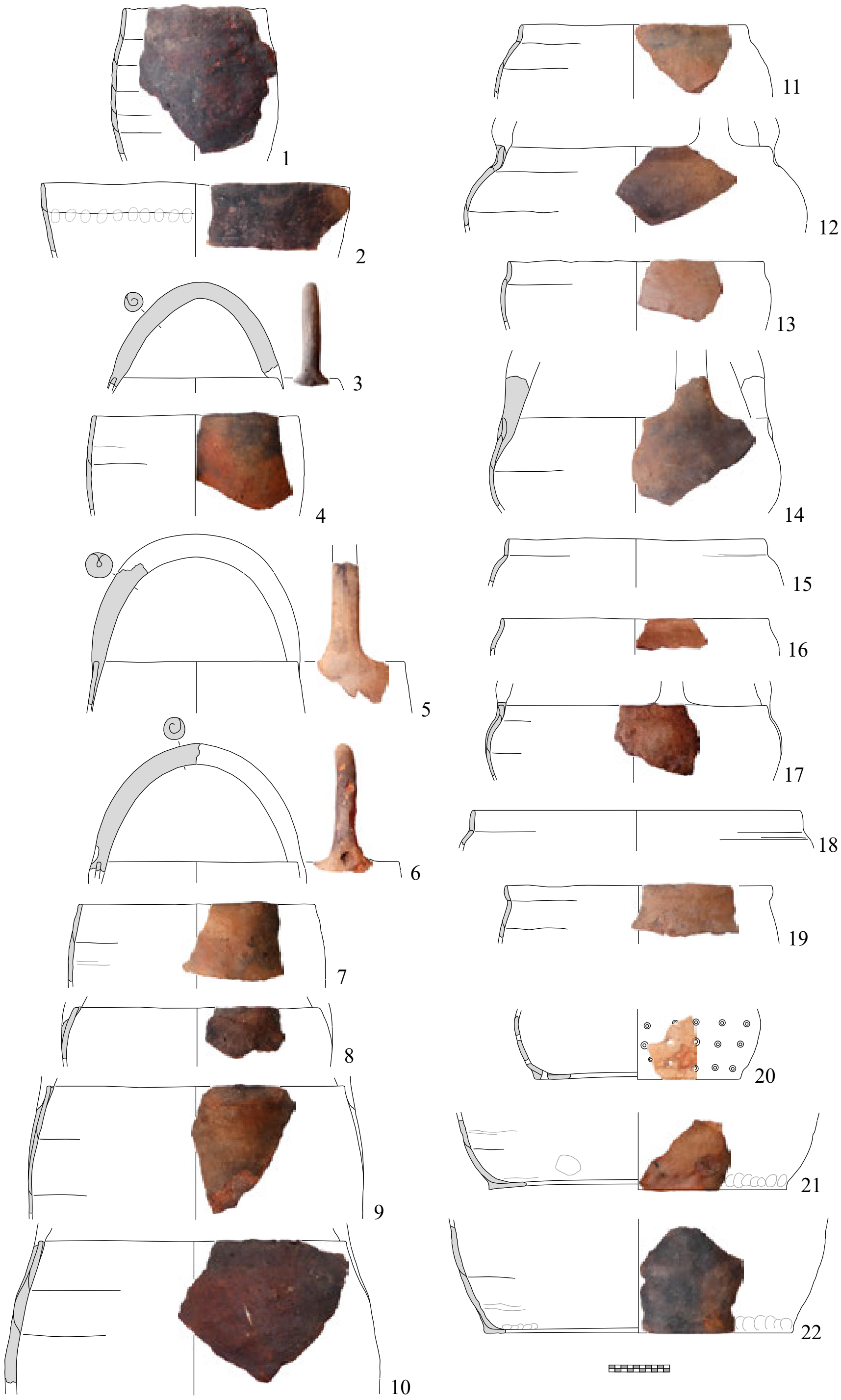


Planche X – Panel de formes de l'US 1038 (K. Peche-Quilichini)

Plate X – US 1038 shapes panel (K. Peche-Quilichini)

UDC: 728.6:398]:502.131.1(234.422.1)
728.6:398]:502.131.1(292.451/.454)
https://doi.org/10.2298/STA2272337B
Original research article

DRAGOLJUB BOROJEVIĆ, PhD candidate, Faculty of Architecture, University of Belgrade

NATURAL ENVIRONMENT AS AN INFLUENCING FACTOR FOR THE ARCHITECTURE OF THE DINARIC AND CARPATHIAN LOG CABIN

e-mail: bor_dragoljub@yahoo.com

Abstract. – Similarities between the forms of log cabins in the Carpathians and the Dinarides are evident. There is also an obvious likeness between the natural environment in the Dinarides and the Carpathians. This raises the logical question of why the builders in these two places built houses identical in form and whether the natural environment had any influence on this. Scientists have determined that humans inherit a genetic attraction towards their natural surroundings and that they react positively to it, even if they have never experienced living there. The constant contact humans had with nature and naturally occurring shapes and forms led them to develop aesthetic preferences towards this kind of imagery and build architectural spaces they could associate with them. The Dinaric and Carpathian log cabins are a clear example of how the environment influenced the aesthetic preferences of vernacular builders, creating a need to design naturally evocative spaces inspired by the imagery they perceived in their natural habitat. It is very telling that the vernacular builders, who could have built their log cabins in a number of different ways without coming into conflict with objective factors of their surroundings, still independently chose an identical design. The desire of builders in the Carpathians and the Dinarides to build forms that matched their natural environment is evident, which, according to evolutionary psychology, is a consequence of evolutionary development and the need to ensure survival. Builders in the Carpathians and the Dinarides used more complicated and demanding constructive elements in order to get a more natural form of the building. When they create, humans can only use the forms they are familiar with and which they have developed aesthetic preferences for, and this includes any naturally occurring shapes, such as vegetation and terrain configuration. The similarities between the Dinaric and Carpathian log cabins are a result of the vernacular builders using locally sourced natural materials and taking into account factors such as climate, vegetation and terrain configuration, which they had developed similar aesthetic preferences for. The natural environment, as a factor of aesthetic preferences of vernacular builders, conditioned the architectural form of the Carpathian and Dinaric log cabins.

Key words. – lead icon, cult, Danubian Horsemen, Pannonia Inferior, spatial (archaeological) context

It is evident that the forms of the Dinaric and Carpathian log cabins are identical. Identical log cabin forms are not a coincidence, they were conditioned by existing common factors. A number of studies conducted on the Dinaric log cabin established facts about the constructive system, materials and links, organisation and the use of space, but no studies have been done about the form of the Dinaric log cabin and why it was built exactly that way. Jovan Cvijić is the only one to note and state that it matches the natural environment and that it is identical to the log cabins in the Carpathians. [1] Identical log cabins at these two locations open the logical question of why the vernacular builders built the same form of houses.

In order to comprehend why the vernacular builders in the Dinarides and the Carpathians designed their cabins in such a manner, it is important to pay attention to their way of life, the context in which they created, the construction systems and

[1] Цвијић 1922.

Manuscript received 21st February 2022, accepted 27th October 2022

materials they had at their disposal, and their acquired and developed aesthetic preferences. We can only understand why these cabins took on this specific form if we take all of these factors into account. The way of life and social context in which vernacular builders practised their craft were different in the Dinarides and the Carpathians, but environmental factors conditioned the use of identical building materials and informed their aesthetic preferences. Aesthetic reactions and preferences belong to the domain of philosophy. However, other scientific fields, such as psychology, evolutionary psychology and, owing to breakthroughs in modern technology, neuroaesthetics, have also taken an interest in studying aesthetic reactions in recent years.

Evolutionary psychology views aesthetic needs and reactions as evolutionary adaptations whose function is ensuring human survival and, as such, it follows that they had a very important role in determining the behaviour and activities of vernacular builders in the Dinarides and Carpathians. Simply by using the term aesthetic needs, we indicate that we are talking about something that is essential for staying alive and ensuring our continued survival. These needs must be met, which implies that aesthetic reactions are genetically predetermined and that they occur with certain regularity, independent of human volition and regardless of geographic location. This paper will make use of outlooks and research results of evolutionary psychology in order to explain the emergence of identical log cabin designs in the Dinarides and the Carpathians. The socio-economic and cultural context was different for the vernacular builders in these two regions. However, the natural environment was similar, therefore, they used the same locally sourced materials to create identical forms that corresponded to their surroundings, which indicates that the natural environment and aesthetic needs and preferences of vernacular builders influenced their activities in a way that resulted in identical designs of log cabins in two different geographic locations, regardless of differences in their socio-economic and cultural conditions. The aesthetic reactions and preferences that vernacular builders in the Dinarides and the Carpathians had towards their natural surroundings, in particular when it came vegetation and terrain configuration, conditioned the specific formation of log cabins that were designed to be naturally evocative and to correspond to the habitat they originated from.

Research objective

The vernacular builder acquired and developed preferences towards naturally occurring forms in his environment and used them to create a naturally evocative space. Man will find an architectural space aesthetically pleasing and comfortable to live in if it includes elements that he can recognise and associate with his natural habitat. The objective of this paper is to use research and evolutionary psychology to draw attention to the influence of the natural environment on the formation of aesthetic reactions and preferences of the vernacular builder, which are evident in the identical Dinaric and Caprathian log cabin designs. It is important for architects to recognise how the natural environment, vegetation and terrain configuration impact the formation of aesthetic reactions and preferences, so that they can design spaces better tailored for human use. Looking at the examples of Dinaric and Carpathian log cabins, it becomes evident that vernacular builders, guided by their aesthetic need for naturally evocative forms that they perceived in their surroundings, independently came up with identical log cabin designs.

Research methods

Implementing the method of compiling research data, findings in the field of evolutionary psychology will be used to shed light on the influence of the natural environment on aesthetic reactions, and to explain aesthetic preferences and the human need for naturally evocative architectural spaces. Using the case-study method, this paper will analyse the Dinaric log cabin design as a typical example of man's aesthetic preferences being influenced by the natural habitat and its compatibility with its natural surroundings. The method of comparison will then be used to analyse the forms of the Dinaric and Carpathian log cabins in order to establish a correlation between buildings that are similar in shape but which originated in different contexts, and to establish the factors that influenced the similarities between the subjects in question.

THE NATURAL ENVIRONMENT AS A PREDICTOR OF AESTHETIC PREFERENCES

Nature is considered to be a predictor of human aesthetic preferences acquired through evolutionary processes, as well as of our inherent affinity towards characteristic forms associated with our natural habitat. In his research, Orians explains the relationship

between man and his surroundings. Humans prefer an environment that is thought to be reminiscent of the one from which they emerged; namely, the region of the east African savannahs. Even though the subjects of his study had never lived in a savannah, they reacted very positively to images of savannahs, which led to the conclusion that aesthetic preferences are transferred genetically and that people react in a very similar way to specific forms in their environment, showing a preference towards them because of genetic predispositions. Lavish, horizontally oriented tree crowns and gently sloping grasslands are specific to savannahs, and it was revealed that humans have a preference for this kind of habitat and its associated shapes, even today. [2]

Multiple studies have confirmed that the natural environment influences the formation of aesthetic preferences and that humans have an affinity towards configurations and ratios that they see in their habitat. Humans will develop aesthetic preferences through prolonged exposure to naturally occurring forms in their surroundings. A lesser preference towards unfamiliar objects has an adaptive function, whose purpose is to protect the body by reducing interactions with unknown entities until it has been established that they pose no physical danger.[3] Therefore, there are two important factors that have influenced and are still influencing human building activities; aesthetic preferences towards the natural environment that are transferred genetically, as well as the human ability to develop aesthetic preferences towards the forms they perceive while dwelling in their natural surroundings.

Research conducted by Hisham Gabr confirms that elements from our natural surroundings are predictors of aesthetic preferences. He came to the conclusion that the main predictors of aesthetic preferences include various local plant species and terrain formations in our natural environment.[4] Humans use the preferences they inherited genetically as a model for building architectural structures, as well as the ones they acquired by living in their natural habitat. This was noted by Cvijić after observing the Dinaric log cabin in its natural surroundings. He stated that this kind of house was in harmony with the composition, appearance and vegetation of the landscape.[5] The link between man and the environment is very important, and Wilson was the first to introduce the concept of "biophilia" into science in an attempt to account for the gravitational pull humans feel towards nature, as well as for the innate need to connect with the habitat and other life forms in it.[6] When humans first started building, they modelled their creations on peripheral elements from their natural environment. Carl Jung said that nothing can come out of a man that is not already within him.[7] Therefore, by using elementary logic, one can conclude that man can produce only what is already within him, what he knows and has already mastered cognitively. Examples of utilising natural peripheral forms in architecture can be traced back to ancient times, when the builders modelled their buildings after various forms of vegetation; for example, the columns in Egypt imitated the shapes of papyrus and lotus, and in ancient Greece, the capitals of the Corinthian columns were decorated with acanthus leaves. This is a tradition that continues to this day in the works of modern architects such as Gaudi, Zaha Hadid and Sou Fujimoto. It is a fact that builders used plant imagery from their own habitat rather than from other geographic regions, because these were the forms that they were familiar with and the ones they had developed aesthetic preferences towards. Analysis of the correlation between the form of the Dinaric log cabin and its natural environment

The creative activity of vernacular builders most clearly illustrates their aesthetic preferences. In their designs, they utilised elements that left the biggest impression on them and invoked the most intense emotional reactions, which included imagery that they perceived on a daily basis. This is supported by the fact that emotions enhance memory and help store information.[8] In the process of building a log cabin, the vernacular builder used the imagery he had perceived and memorised, as well as its associated forms. The vernacular builder almost certainly modelled his creations on this internalised imagery, which had invoked a strong emotional reaction upon perception and caused him to develop a preference towards the shapes he associated with it. Lotsch confirms this in his research and states that humans strive to introduce vegetation into their surroundings whenever possible, either by bringing living specimens into their architectural space, or by substituting them with artificial forms.[9]

---

[2] Orians 1980, 49–66.

[3] Janković 2014, 8–50.

[4] Gabr 2005.

[5] Цвијић 1922.

[6] Joksić 2010, 148–153.

[7] Carl Jung interview. Taken from vesti.rs, 3. 8. 2017, edited on 2. 4. 2020. Accessed on 1. 9. 2022.

[8] Pavlinac 2011.

[9] Lötsch 2015.





Fig. 1. Chalet church in Palačkovci
(https://commons.wikimedia.org/wiki/File:Црква_брвнара_у_Доњим_Палачковцима.jpg, Accessed on 12. 3. 2019)
Fig. 2. Conifer crown
(https://upload.wikimedia.org/wikipedia/commons/3/3f/Pinus_nigra_JPG2A.jpg, Accessed on 12. 3. 2019)

Сл. 1. Црква брвнара у Палачковцима
(https://commons.wikimedia.org/wiki/File:Црква_брвнара_у_Доњим_Палачковцима.jpg, йрисшуйљено 12. 3. 2019)
Сл. 2. Крошња чешинара
(https://upload.wikimedia.org/wikipedia/commons/3/3f/Pinus_nigra_JPG2A.jpg, йрисшуйљено 12. 3. 2019)

The vernacular builder subconsciously transferred the elements that he had an affinity with from his natural environment into the Dinaric log cabin. The author's research conducted in the municipalities of Kneževo, Mrkonjić Grad, Ribnik and Banja Luka in Republika Srpska in 2017 and 2018 included the mapping of original log cabin locations, as well as locations where they exist to this day. Interviews were conducted among the local population that used to live in these cabins, including some who had built them. When asked what the log cabins reminded them of, the subjects usually answered that they thought they looked like a spruce tree or a mushroom[10]. None of the locals in that area ever associated them with man-made artefacts; the answer was always something from their natural environment that they were familiar with and which was present in their subconsciousness, indicating that vernacular builders employed similar associations when building these types of cabins.

This implies that the vernacular builder perceived the natural forms he found in his surroundings and had an emotional reaction to them because they offered him shelter and a sense of security, which resulted in them eventually becoming the subjects of his creative activity. By dwelling in a mountainous area, surrounded by coniferous forests, the vernacular builder developed preferences towards these forms of vegetation and terrain configuration. Therefore he expectedly and inevitably modelled his work on the shapes he had become familiar with, which resulted in the naturally evocative shape of the log cabin because, like Jung said, other shapes could not "come out" of the builder. This is clearly exemplified by the correlating forms of the Dinaric log cabin, coniferous crowns and the terrain itself. The results of the aforementioned research are backed by the following images that show examples of the terrain and crown configuration found in the natural environment that the Dinaric log cabin originated from.

There is an evident correlation between the form of the chalet church in Palačkovci, Republika Srpska, Bosnia and Herzegovina, and the conifer crown shown

---

10 The research was conducted by the author for his doctoral thesis named "Dinaric log cabin as an example of the materialised needs of the vernacular builder". Locations where the log cabins were built, as well as their remains, were mapped. Members of the local population in settlements of the municipalities of Kneževo, Mrkonjić Grad and Ribnik who had lived in a log cabin were interviewed. An interview was conducted with 14 people.



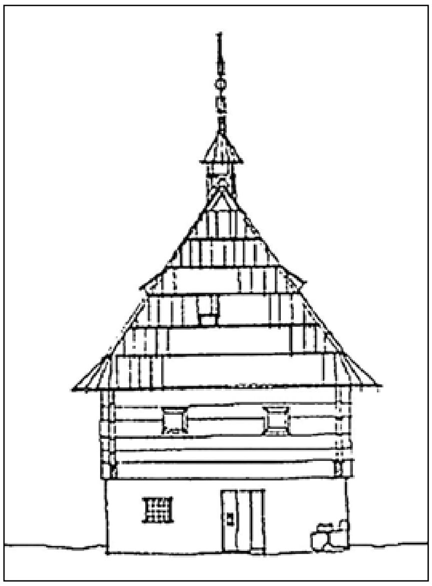


Fig. 3. Shapes of conifer crowns
(https://www.slideshare.net/Eva983/etinarske-zimzelene-ume, Accessed on 12. 3. 2019)
Fig. 4. Shape of a Dinaric log cabin according to R. Findrik (Findrik 1994, 97, Fig. 60)

Сл. 3. Изглед крошње четинара
(https://www.slideshare.net/Eva983/etinarske-zimzelene-ume, приступљено 12. 3. 2019)
Сл. 4. Изглед динарске брвнаре, цртеж: Р. Финдрик

in Figure 2. The vernacular builder was familiar with the simpler construction of a gable roof. However, a hip roof with arched transitions between frontal and lateral slopes was used on the chalet church, which additionally complicated the construction, but this form resembles the forms from the natural environment even more. An identical arched transition between roof slopes is visible on log cabins in Slovakia, pictured in Figure 15.





Fig. 5. Tisovac Mountain
(https://plus.google.com/photos/photo/102615025477810877497/6624182348730476706 Petar Bojic, Accessed on 12. 3. 2019)
Fig. 6. Chalet church in Javorani. Photo D. Borojević

Сл. 5. Планина Тисовац
(https://plus.google.com/photos/photo/102615025477810877497/6624182348730476706 Petar Bojic, приступљено 12. 3. 2019)
Сл. 6. Црква брвнара у Јаворанима. Фото Д. Боројевић



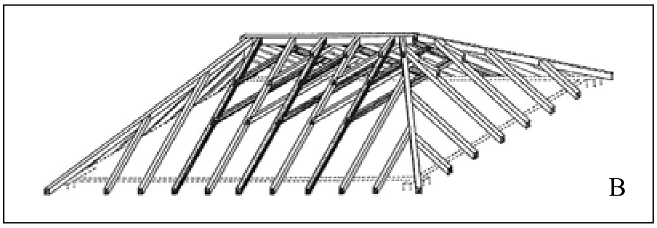


Fig. 7. Log cabin in Ivanjica: a) facade;
b) axonometric view of the roof structure
(Source: Ljiljana Ćertić, 1979)

Сл. 7. Брвнара у Ивањици: а) изглед куће;
б) аксонометрија кровне конструкције
(Извор: Љиљана Ћертић, 1979. година)

The vernacular builder found shelter under the crowns of coniferous trees, which inevitably became a model for his log cabin because he had developed preferences towards this form due to the sense of security they provided him with. The correlation between the forms of the conifer crowns and the roof of the building shown in Figure 3 can be seen if one compares the outline of the conifer crowns and the slope of this building's roof. The outline of the conifer crowns and the cross section through the log cabin roof have an identical shape, which is an equilateral triangle. It is well known that the vernacular builders determined the slope of the roof by making the rafters equal to the width of the house, which resulted in 60° angles and an equilateral cross section.

Figure 5 shows the Tisovac Mountain in Republika Srpska, Bosnia and Herzegovina, while Figure 6 shows a chalet church from the year 1746 in the village of Javorani, in the Kneževo municipality, at the foot of the mountain. The correlating forms of the church and the mountain are evident, which corroborates the theory that the terrain configuration and vegetation influenced the design of the log cabin, as discussed by Cvijić.

Geometric analysis of the log cabin roof

Studying the geometry of log cabin roofs, Findrik came to the conclusion that there were no regularities in the way the vernacular builder determined the slopes of the frontal log cabin hip ends. Measuring the distance between the rafters and the corners of the cabin revealed that no two buildings had the same ratio between the distance of the first rafter couple and the cabin corner, and the width of the hip end[11]. However, the slope of the lateral roof planes was consistent and usually measured around 60°, with small variations. The dimensions depended on the timber itself, meaning that the length of the rafter, starting from the wall plate and ending with the roof ridge, was equal to the width of the cabin. This was a rule that the vernacular builder followed. The slopes of the roof planes varied according to the time period in which the cabin was built and Findrik noted that the newer cabins, where the roof structure had been replaced, had the same slope for all four roof faces[12]. Studying the log cabin built in the mid-19th century (1855) in Šarenik next to Ivanjica (Fig. 7), Ivana Ćertić determined that the cabin roof used to have longer rafters and a steeper slope before it was reconstructed. Ćertić noted that, according to the owner's testimony, the rafters were shortened seventy years prior in an attempt to increase visibility inside the cabin. Before the reconstruction, the cabin roof had a steeper slope.[13]

The cabin in Alin Potok in Zlatibor that was built in 1892 has a bonnet roof with a visible double slope, probably for the same reason as the cabin mentioned above; to provide the interior of the house with more light. Later, the cabins were built with milder slopes, which also allowed more light inside the house without the need for a double slope. Cabins with lower slopes (Fig. 8) and an angle shaper that 60°, such as the ones Findrik measured in Stublo and Rudine (Zlatibor), had rafters that

[11] Findrik, 1998, 140–153.
[12] Findrik 1998, 140–153.
[13] Ćertić 1979, 201–212.

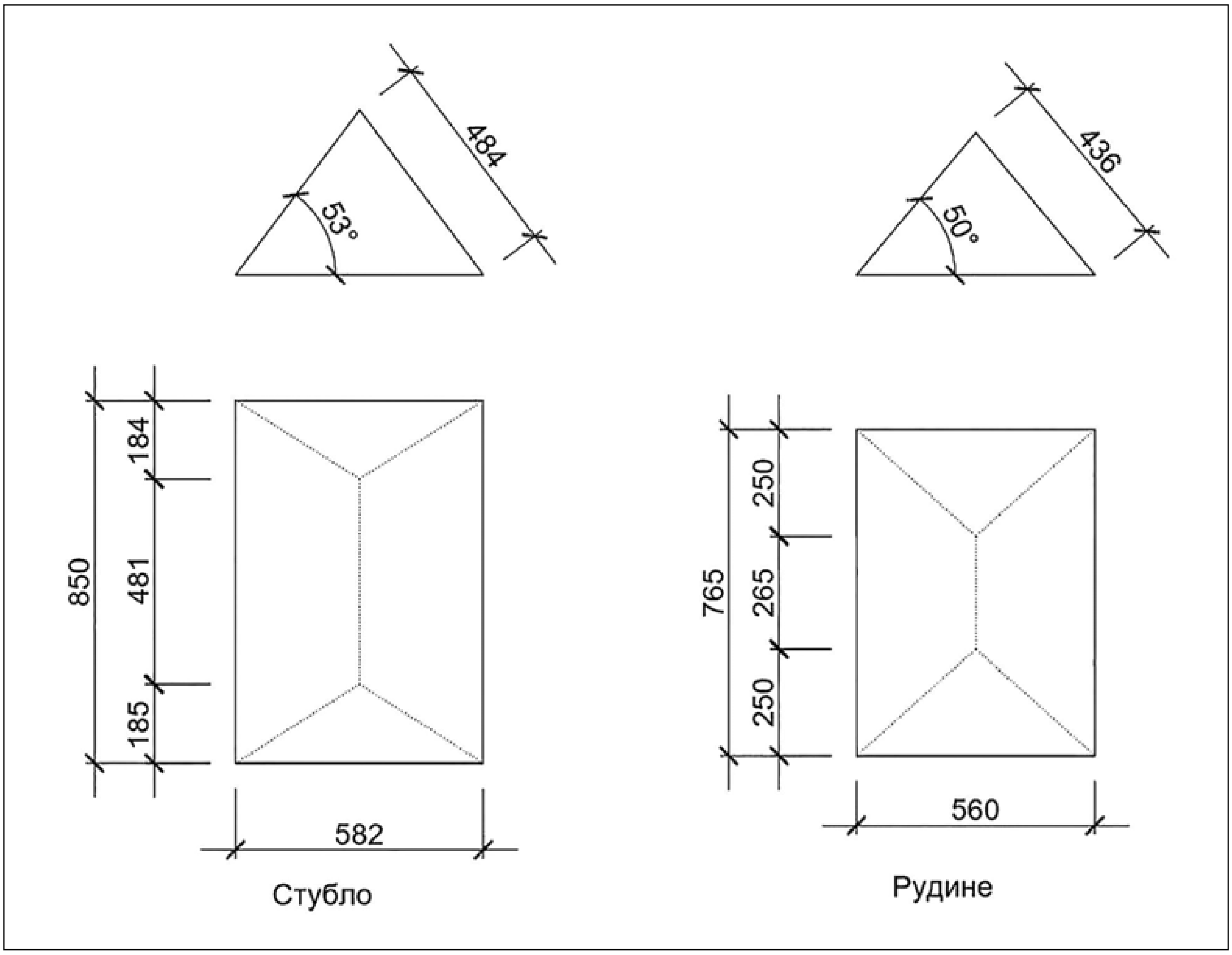


Fig. 8. Geometric analysis of log cabin roofs on Zlatibor. Drawing: Dragoljub Borojević

Сл. 8. Анализа īеомеūрије крова брвнара на Злаūибору. Црūеж: Драīољуб Боројевић

were shortened by approximately one metre, which is equal to one row of shingles.

The length of rafters on Zlatibor log cabins that were measured by Findrik corresponds to the number of rows of roof shingles. Traditionally, shingles used to vary in length from 70 to 100 cm, therefore, it was important that the length of the rafters could accommodate full rows of shingles without shortening them. Cabins with a bonnet roof are specific to Zlatibor. This kind of roof required a structure where the rafters were abbreviated at the wall plate and the bottom row of shingles was attached to a separate structure with a milder slope than the rest of the roof. When we examine the correlation between the actual length of these rafters and the 65° slope that we see on the cabins in Alin Potok and Ljubiš (Zlatibor), it becomes evident that the length of the rafters was still determined according to the width of cabin, and that the roof face was longer by a single row of shingles, which formed the eave. The vernacular builder still followed the rule that called for an equal rafter length and cabin width, but because the rafter had to end at the wall plate, the slope of the bonnet roofs increased to 65° (Fig. 9).

Examples of log cabins documented on Zlatibor by Findrik (Fig. 13) allow us to conclude that even though the vernacular builder wanted to provide the most favourable living conditions and the most rational roof structure, he still felt compelled to follow the rule of equal rafter length and cabin width, which used to form an equilateral triangle that is identical to the outline of the conifer crowns native to his surroundings.

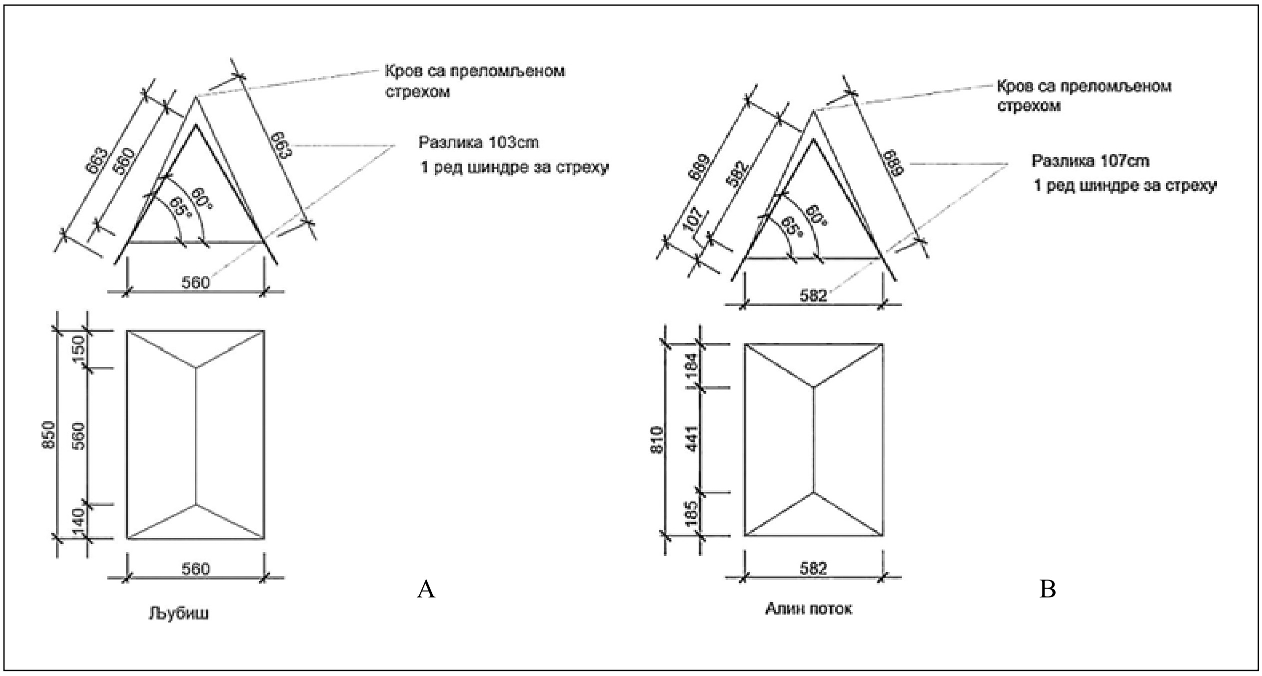


Fig. 9. Geometric analysis of the bonnet roof of Zlatibor log cabins. Drawing: Dragoljub Borojević

Сл. 9. Геометријска анализа преломљеног крова брвнаре на Златибору. Цртеж: Драгољуб Боројевић

Analysis of the roof structure

The roof of the Dinaric log cabin is a rectangular hip roof, but when we analyse the design and the way in which the vernacular builder treated the roof slopes, we can divide its structural elements into three groups. The central part of the roof bears the dead load of the roof itself, as well as the environmental load from snow and wind, but it also takes on a part of the load from the hip ends (which were called *duma* by the vernacular builder). The central part of the roof structure includes rafter couples that lean on wall plates lying over longitudinal logs that form the cabin walls and connect at the ridge beam. The rafter couples are connected by one or two collar beams, depending on the length of the rafter, forming a single collar roof. The slopes of the hip ends are steeper than those of the other two planes and their only function is to close the front face of the roof, therefore, they are treated as a separate structural group. The vernacular builder differentiated between the hip ends and the central structure because these slopes were non-load-bearing and, as such, they were given a special name, *duma*. Because of this, this type of roof was also called "the *duma* roof" (i.e., *krov na dume*) in some Dinaric regions (Fig. 10).

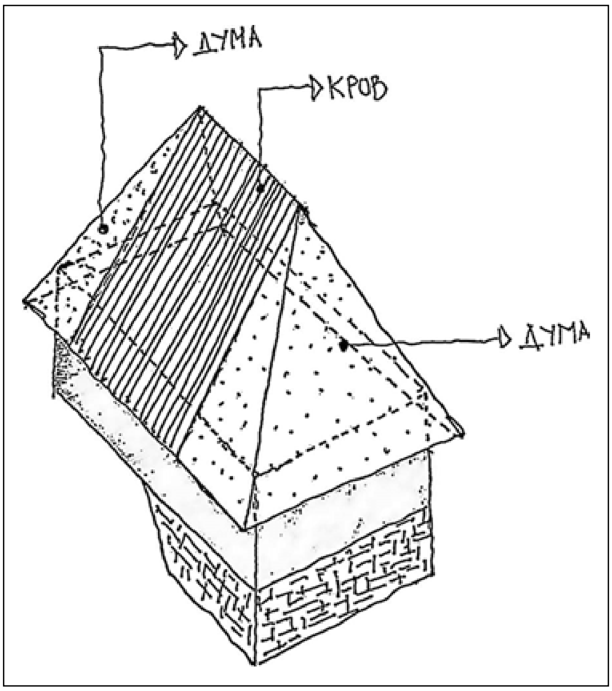
The structural elements of the hip ends, i.e., the hip rafters, lean on the wall plate and the ridge, which means that a part of their static and dynamic load is transferred to the closest rafter couple in the central load-bearing group. During his field research, the author documented a memory of Slavko Ilić, who used the term "*krov na dume",* and also said that this kind of roof was better at repelling the wind and rain. This term was also used by Simo Nikodinović, who recorded testimonies, customs and important events among the local population of Petrovo Polje on Vlašić, which was also his birth place.[14] Usually, no shortened rafters, which would have had to lean on the hip rafters, were inserted between the closest rafter couple and the hip rafters, and the space between them was bridged by battens that the roof covering was attached to. This implied that the maximum possible distance between the hip rafters and the closest rafter couple depended on the load-bearing capacity of the battens themselves. Therefore, these dimensions were based purely on structural requirements and not any specific proportions related to the hip ends.

[14] Nikodinović 2014, 59–81.

Since the vernacular builder sought to maintain an angle of 60° for the lateral roof planes, the hip ends had a steeper slope for structural and geometric reasons. The maximum distance between the first rafter couple and the corner of the cabin could not be bigger than what could be bridged by horizontal battens with no additional structural support, and the reason for this was to avoid a more complicated structural system and the need to connect to the hip rafters. In most cases, the structural elements of the hip ends included only the hip rafters that connected to the central load-bearing rafters at the ridge, with no additional support from jack rafters on the side. Jack rafters are shortened rafters that connect to hip rafters and the wall plate. Rafters on the hip end were supported by the hip rafters and the frontal wall plate, which transferred the load from this side of the roof to the closest rafter couple, and then on to the lateral and frontal wall plates. The smaller the distance between the closest rafter couple and the corner of the house was, the less the load of the hip ends was on the lateral sides of the roof. It is obvious from the load distribution that the hip ends are not load-bearing and that their only function is to close off the roof space, which can be clearly seen on the example of log cabin roofs in Slovakia. Because the hip ends (or the so-called *dumas*) were non-load-bearing, from a structural standpoint, it was more convenient for the first load-bearing rafter couple to be as close as possible to the corner of the cabin because that meant taking on a smaller load.

According to Findrik's measurements, the distance between the first rafter couple and the corner of the house was around 150 cm, which meant that the bottom batten that carried the first row of shingles had to span 180–200 cm without additional support in order to connect to the hip rafters, which was possible to achieve with 10x5 cm battens (Fig. 11). These were the two factors that dictated the maximum distance between the first load-bearing rafter couple and the corner of the cabin.

The height of the ridge beam depends on the width of the cabin because of the rules that determine the



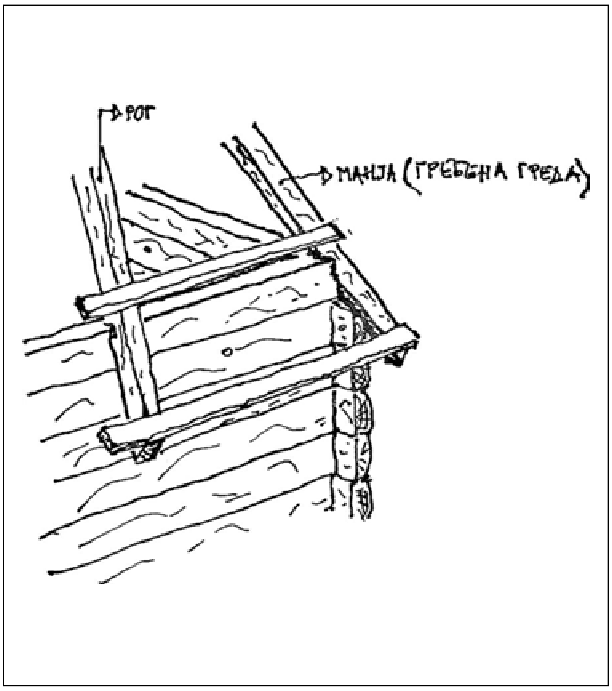


Fig. 10. Duma roof. Drawing: Dragoljub Borojević
Fig. 11. An illustration of the relationship between the first rafter couple and the hip rafter. Drawing: Dragoljub Borojević

Сл. 10. Кров на думе. Цр̄теж: Дра̄гољуб Боројевић
Сл. 11. Приказ односа ӣрвоī ӣара роīова и īребене īреде. Цр̄теж: Драīољуб Боројевић

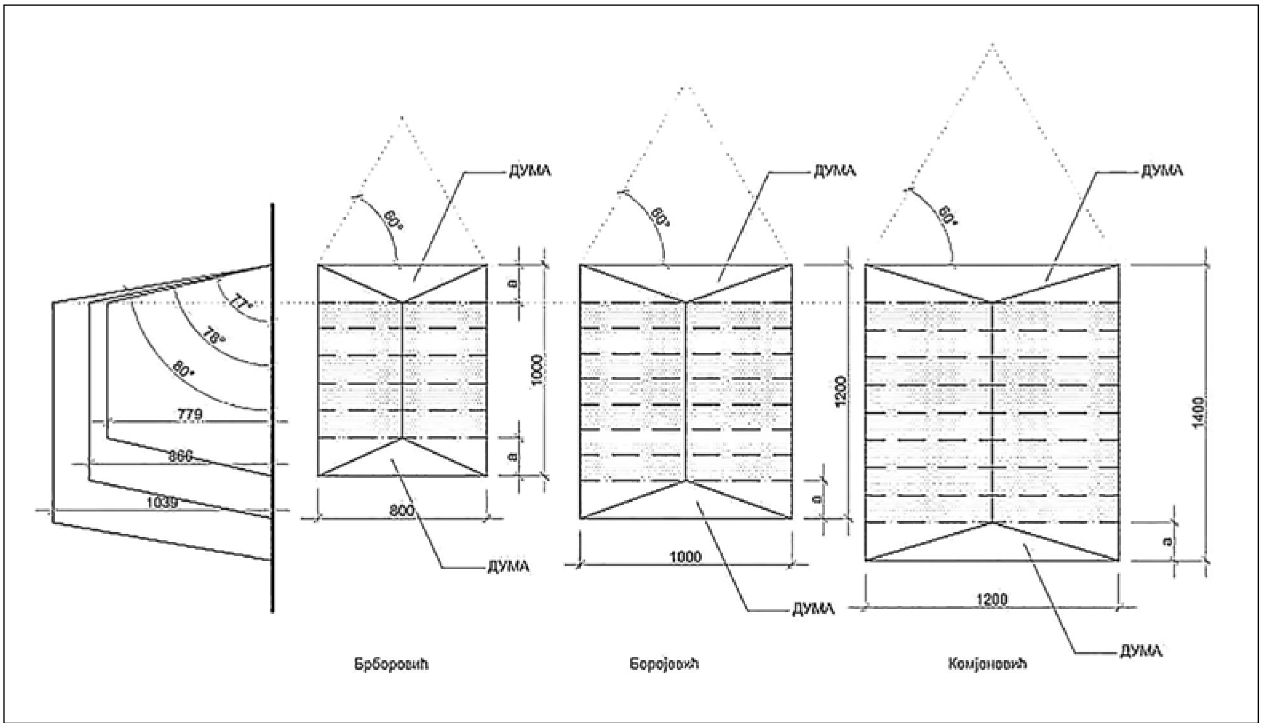


Fig. 12. Geometric analysis of log cabin roofs at the foot of Čemernica Mountain.
Drawing: Dragoljub Borojević

Сл. 12. Геометријска анализа кровова брвнара у подножју Чемернице.
Цртеж: Драгољуб Боројевић

length of the rafters, and the distance between the first load-bearing rafter couple that connects to hip rafters and the corner of the cabin is limited, therefore, it is more or less the same for all cabins. Different ridge heights are the result of varying dimensions of the floor plan, particularly the width of the cabin, because this is what determines the length of the rafters. The slope of the hip ends varies, depending on the distance of the first rafter couple and the ridge height.

The structurally conditioned variable (a), which represents the distance between the closest rafter couple and the front side of the cabin, and the height of the ridge in relation to the wall plate determine the slope of the hip ends (Fig. 12) Wider cabins required a higher ridge, the result of which were steeper hip ends.

The distance between the first rafter couple and the corner of the house was always smaller than half of the house width, which, along with the rafter length, ensured that hip ends always had a steeper slope than the lateral roof planes. The vernacular builder was also familiar with the gable roof structure, but he only used it for his accessory buildings. This makes it clear that the vernacular builder sought to create a pyramidal roof shape by utilising a complicated roof structure that involved different roof slopes because it represented a naturally evocative form that he associated with his surroundings and the configuration of natural shelters in his habitat, even though he was familiar with gable roofs and already used them on accessory buildings, sealing off their vertical sides with shingles. The cabin represented his shelter, therefore, it had to have the form of shelters found in his natural environment, providing the vernacular builder with a sense of safety. There are no recorded cases of any natural phenomenon causing damage to a Dinaric log cabin.

Comparison of the Dinaric and the Carpathian log cabin

Research conducted by Jovan Cvijić supports the claim that naturally occurring forms in the vernacular builder's habitat were "integrated" into the Dinaric log cabin, as well as the idea that the natural environment influences aesthetic preferences and, therefore, the design and construction of architec-



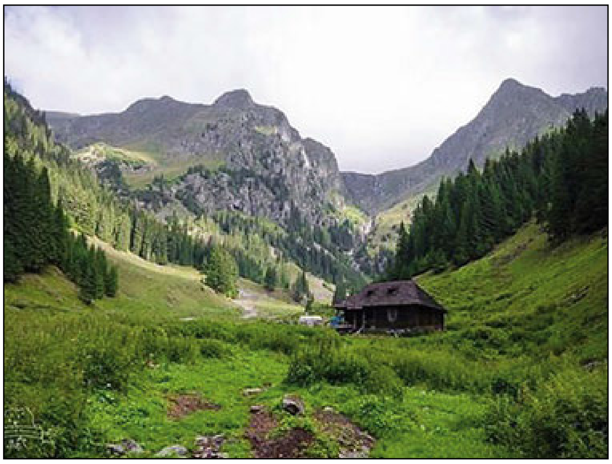


Fig. 13. Mount Treskavica (Dinaric Alps)
(https://mapio.net/pic/p-22804942/ , Accessed on 12. 3. 2019)
Fig. 14. Carpathian Mountains
(http://www.temerin.org/planinarska-akcija-karpati-moldoveanu-buteanu-u-rumuniji/, Accessed on 12. 3. 2019)

Сл. 13. Планина Трескавица (Динариди)
(https://mapio.net/pic/p-22804942/ , йрисшуйљено 12. 3. 2019)
Сл. 14. Карйаши
(http://www.temerin.org/planinarska-akcija-karpati-moldoveanu-buteanu-u-rumuniji/, йрисшуйљено 12. 3. 2019)

tural spaces. Cvijić points to the close relationship between the form of the log cabin and its surroundings and notes that identical cabins appear in other geographic regions. He cites examples of log cabins in the wooded areas around Krakow on the north side of the Tatra Mountains, in the proximity of Zakopane, Szczawnica and Czorsztyn, which, to his surprise, turned out to be identical to the log cabins that can be found on the Balkan Peninsula, in the Dinarides. (Cvijić 1922). It is obvious that there are factors here at play that influenced the emergence of identical log cabin forms that correspond to their natural surroundings, even though they are located hundreds of kilometres away from each other. These cabins were built on a stone platform with simple organisation, a rectangular floor plan and a conspicuous, voluminous hip roof. Therefore, it can be inferred that there were factors influencing vernacular builders in different places, under different socio-economic, technological and cultural circumstances, with no means of intercommunication or ways of exchanging experiences, to use their naturally sourced materials and create structures that are virtually indistinguishable in form. This implies that there are objective factors that influence construction – such as the environment, the socio-economic system, way of life and industry, culture and tradition – as well as subjective factors, which include the aesthetic reactions and preferences of the builders. It is a fact that log cabins in these two regions emerged under different socio-economic and cultural circumstances, but in identical natural surroundings (Figs. 13, 14) and that the people who built them had the same aesthetic preferences, which induced them to design their houses in a similar way. This points to a human need for naturally evocative designs that can be associated with forms occurring in their environment. The Carpathian log cabins, which were built under different socio-economic and cultural circumstances, are proof of the claim that natural surroundings are a predictor of aesthetic preferences, which also influenced the design of the Dinaric log cabins.

The link between the environment and the Dinaric and Carpathian log cabins is evident. It is a fact that the natural habitats where these log cabins originated in the Dinarides and Carpathians are similar, just like the form of the cabins themselves. Basic logic points to the environmental conditions being the common denominator that influenced the builders to design identical log cabins. Therefore, if the same log cabin design occurs in two different





Fig. 15. Carpathian Mountains, Slovakia
(https://commons.wikimedia.org/wiki/File:Muzeum_kysuckej_dediny-1.jpg, Accessed on 12. 3. 2019)
Fig. 16. Carpathian Mountains, Romania
(https://travelingilove.com/sanok-open-air-museum-in-winter/, Accessed on 12. 3. 2019)

Сл. 15. Карпати Словачка
(https://commons.wikimedia.org/wiki/File:Muzeum_kysuckej_dediny-1.jpg, приступљено 12. 3. 2019)
Сл. 16. Карпати Румунија
(https://travelingilove.com/sanok-open-air-museum-in-winter/, приступљено12. 3. 2019)

geographic locations, we can conclude that the link between the structural form of the log cabin and its natural surroundings is not a coincidence, but rather an evident consequence of environmental influences on the vernacular builder, which also implies that vernacular builders in different regions reacted to their natural habitat in a similar way.

Figure 13 shows a region in the Dinaric Alps, Mount Treskavica, whereas Figure 14 represents a Carpathian landscape. The natural environment of the Carpathians and Dinarides is identical in appearance; the terrain and vegetation take on similar configurations, such as high mountains and conifer formations, therefore, the vernacular builders in these regions developed the same aesthetic preferences towards the forms they were surrounded by. These commonly preferred forms (of natural elements) that the builders used in their designs resulted in the creation of log cabins whose architectural form and structure is indistinguishable.

Research done by evolutionary psychologists has shown that the act of looking at nature decreases "excess" circulation (or activity) in the brain and that the activity of the nervous system is also reduced. Tree canopies and mountain formations represent natural fractal patterns. Scientists have determined that the fractal properties of highly preferred objects correspond to those from our natural surroundings and that our perception of and receptiveness to art are informed by the world around us, as well as the fact that the sensitivity of our visual system corresponds to the fractal properties of our environment and that such aesthetic preferences are a consequence of our uninterrupted exposure to natural fractals. [15]

Orians determined that humans react very positively to images of savannahs; gently sloping grasslands and horizontally oriented tree crowns.[16] Wilson talks of the gravitational pull that nature has on man.[17] Therefore, due to constant contact between humans and their natural habitat, man has developed aesthetic preferences towards these forms, which he then used as inspiration for architectural spaces. The Carpathian and Dinaric log cabins are clear examples of situations where builders reacted in the same way to a similar natural environment and developed preferences towards it, resulting in log cabins that are identical in form. (Figs. 15, 16, 17, 18) The roof shape, slope and materials utilised by the vernacular builders in the Dinarides and the Carpathians are identical. Similarity between log cabins in the Dinarides and the Carpathians and the link of their form with the natural environment

15 Ćirović 2014, 26–54.
16 Orians 1980, 49–66.
17 Joksić 2010, 148–153.





Fig. 17. Dinaric Alps, Serbia. Photo D. Borojević
Fig. 18. Carpathian Mountains, Poland
(https://romaniadacia.wordpress.com/2014/10/28/traditional-rural-houses/#jp-carousel-6599, Accessed on 12. 3. 2019)

Сл. 17. Динариди Србија. Фото Д. Боројевић
Сл. 18. Карпати Пољска
(https://romaniadacia.wordpress.com/2014/10/28/traditional-rural-houses/#jp-carousel-6599, приступљено 12. 3. 2019)

is obvious. Therefore, it is a fact that the natural environment in which the log cabins originated in the Dinarides and the Carpathians is identical, just as the form of the log cabins is identical. Elementary logic indicates that the natural environment is the common factor that influenced the builders to build identical log cabins. If the same form of log cabin originates in two locations, one can conclude that the link between the form of the log cabin and the natural environment is not coincidental, but rather the obvious product of the influence of the natural environment on the vernacular builder, who reacted in an identical way to the natural environment in the Carpathians and the Dinarides. This indicates that the peripheral forms of the natural environment that the builder had developed aesthetic preferences for "came out" of the builder himself and became the main theme of his creation.

CONCLUSION

In the examples of identically formed log cabins in the Carpathians and the Dinarides we can see that the natural environment in question, vegetation, terrain configuration, materials used and the climate at both of these locations were the same. It is telling that the builders had an infinite number of ways of shaping their log cabins but that they still did it in the same way because of aesthetic reactions and preferences, which led to them building log cabins that are identical in form. The connection humans have with nature enabled them to acquire aesthetic preferences towards their natural surroundings through evolutionary processes, as well as the ability to develop similar predispositions through prolonged exposure to certain forms and ratios that occur naturally in their environment. The gravitational pull that nature has on man, aesthetic preferences that people have towards it and its overall positive influence on human health create a need for naturally evocative shapes and forms, which builders attempt to transpose into architectural spaces.

It is evident that the vernacular builders in the Dinarides and the Carpathians reacted in an identical manner to the forms they perceived in their natural environment, developed aesthetic preferences towards them and then inevitably used them as a model for their designs by using the same materials. It can be seen that the builders aspired to a form that looked as natural as possible, using complicated constructive elements even though the same goal could have been achieved by using a simpler gable roof, which they were familiar with, but which was not evocative of nature in the same measure. It can be concluded that the identical log cabin forms in the Carpathians and the Dinarides are not a coincidence, but a product of evolutionary development, mechanisms of reactions to our surroundings and an identical natural environment. Images and forms from the natural environments that the vernacular

builders perceived and memorised in their subconsciousness almost certainly became a model for their creation because something that they did not have, or were not familiar with, would not have been able to "come out" of them. The form of the log cabins in the Carpathians and the Dinarides is identical because the builders used natural materials and created buildings that matched the climate, vegetation and the terrain configuration, towards which they had developed identical aesthetic preferences, which means that the natural environment as a factor of the aesthetic preferences of the vernacular building conditioned the architecture of the log cabins in the Carpathians and the Dinarides.

It is of paramount importance for architects to be familiar with the predictors of aesthetic preferences and to take into consideration during the design process how important the environment is for people and how it influences their aesthetic preferences, because this is the only way they can tailor their creations to fit basic human needs.

BIBLIOGRAPHY:

Ćertić 1979 – I. Ćertić, Kuća brvnara u okolini Ivanjice*, Glasnik etnografskog muzeja u Beogradu*, knjiga 43, Etnografski muzej: Beograd, 201–212.

Ћировић 2014 – И. Ћировић, *Избор фрактлалног објекта у поступку детерминације фракталног ритма у архитектонско-урбанистичким композицијама*, докторска дисертација, Архитектонски факултет универзитета у Београду, 2014. (I. Ćirović, *Izbor fraktalnog objekta u postupku determinacije fraktalnog ritma u arhitektonsko-urbanističkim kompozicijama*, doktorska disertacija, Arhitektonski fakultet Univerziteta u Beogradu, 2014).

Цвијић 1922 – Ј. Цвијић, *Балканско полуострво и јужнословенске земље*, превод првог дијела књиге објављене у Француској La Peninsule Balkanique, geographie Humane, у мају 1918, превео Боривоје Дробњаковић 1922. (J. Cvijić, *Balkansko poluostrvo i južnoslovenske zemlje,* prevod prvog dijela knjige objavljene u Francuskoj La Peninsule Balkanique, geographie Humane, u maju 1918. godine, preveo Borivoje Drobnjaković 1922).

Финдрик 1998 – Р. Финдрик, *Динарска брвнара*, музеј „Старо село” Сирогојно, посебна издања књига 2, 1998. (R. Findrik, *Dinarska brvnara*, muzej „Staro selo” Sirogojno, posebna izdanja, knjiga 2, 1998).

Финдрик 1994 – Р. Финдрик, *Народно неимарство*, музеј „Старо село” Сирогојно, 1994. (R. Findrik, *Narodno neimarstvo*, muzej „Staro selo” Sirogojno,1994).

Gabr 2005 – H. Gabr, *Theories & Philosophy Aestetics, Enviromental Behavior Theoris of Aestetics*, postgraduate studies in Architecture, Department of Architecture, University Cairo, (2005). Source: http://www.eng.cu.edu.eg/users/hgcourses/arch702aesthetics/ebtheory.htm, Accessed on 1. 9. 2022.

Jung 2020 – Carl Jung interview. Taken from vesti.rs, 3. 8. 2017, edited on 2. 4. 2020. Accessed on 1. 9. 2022.

Јанковић 2014 – Д. Јанковић, *Развој естетских преференција слика*, докторска дисертација, Филозофски факултет Универзитета у Београду, 2014. (D. Janković, *Razvoj estetskih preferencija slika*, doktorska disertacija, Filozofski fakultet Univerziteta u Beogradu, 2014).

Joksić 2010 – A. Joksić, Stvorenje. Poziv na spas života na zemlji (E.O.Wilson)**,** *Časopis studenata filozofije*, vol. IX, broj 18/19, Filozofski fakultet: Zagreb, 148–153.

Lötsch 2015 – B. Lötsch, *Der streit um das schöne– Ästhetik zwischen Natur und Architektur*, Byotope City, (2015). Source: https://biotope-city.net, Accessed on 1. 9. 2022.

Никодиновић 2014 – С. Никодиновић, Петрово поље од постанка до нестанка, *НИГД Независне новине Бањалука*, 2014. (S. Nikodinović, Petrovo polje od postanka do nestanka, *NIGD Nezavisne novine Banjaluka*, 2014).

Orians 1980 – G. Orians, Habitat selection: General theory and applications to human behavior. In: J. S. Lockard (Ed.), *The evolution of human social behaviour*, Elsevier, Chicago, 49–66.

Pavlinac 2011 – I. Pavlinac, *Neurobiologija emocija i spolnos*, Zavod za neuroznanost, Split, (2011). Source: http://neuron.mefs.hr, Accessed on 12. 8. 2020.

Резиме: ДРАГОЉУБ БОРОЈЕВИЋ, докторанд, Архитектонски факултет Универзитета у Београду

ПРИРОДНО ОКРУЖЕЊЕ КАО ФАКТОР УТИЦАЈА НА АРХИТЕКТОНИКУ ДИНАРСКЕ БРВНАРЕ И БРВНАРЕ НА КАРПАТИМА

Кључне ријечи. – природно евокативни облици, брвнара, естетске преференције, облик, природно окружење

Природно окружење и простор у коме борави изузетно су важни за човјека. Форме и композиције заступљене у окружењу човјеку су значајне због потребе обезбјеђења опстанка, те је он почео да их памти, развија преференције према природном окружењу, генетски насљеђује привлачност према природном окружењу и позитивно реагује на природно окружење, чак и кад нема искуство боравка у њему. Значајем природног окружења за човјека и везе са њим све више се баве различите научне дисциплине – еволуциона психологија, психологија, неуроестетика. Склоности и преференције према облицима и композицијама из природног окружења на које изузетно позитивно реагује неопходни су човјеку у изграђеном окружењу. У противном осјећаће се несигурно и такав простор неће перципирати као повољан за живот, што може имати негативне последице по његову добробит. Због сталног контакта са природним окружењем и формама из природног окружења, човјек је развио естетске преференције према тим формама, тако да је приликом изградње почео да гради по узору на њих. Утицај природног окружења на естетске преференције народног градитеља те његова потреба да гради природно евокативне просторе и облике по узору на облике из природног окружења у коме живи – јасно се виде на примјеру изградње брвнаре у Динаридима и на Карпатима. Градећи у складу са својим потребама и са природним окружењем, два градитеља су градила куће идентичне форме независно један од другог. Приликом изградње брвнара, слике форми из природног окружења које су градитељи перципирали меморисане у својој подсвијести постале су узор по коме су они стварали јер из њих је могло да „изађе" само оно што су имали, што су познавали. Форма брвнара на Карпатима и у Динаридима је идентична не само зато што су градитељи градили у складу са природним окружењем него и због тога што је природно окружење као фактор естетских преференција народног градитеља условило естетске преференције градитеља, самим тим и форму брвнаре на Карпатима и у Динаридима.

UDC: 904:726.821"653"(437.6)(049.32) Original research article

КРИТИЧКИ ПРИКАЗИ – COMPTES RENDUS CRITIQUES

Jozef Zábojník, Július Béreš, Pohrebisko z obdobia avarského kaganátu vo Valalikoch-Všechsvätých. Archeologica Slovaca Monographiae – Studia Instituti Archaeologici Nitriensis Academiae Scientiarum Slovacae Tomus XXVI, Archeologický ústav Slovenskej akadémie vied, Nitra 2016 (+ CD–ROM).

Jozef Zábojník, Pohrebisko z obdobia avarského kaganátu v Obide. Archeologica Slovaca Monographiae – Studia Instituti Archaeologici Nitriensis Academiae Scientiarum Slovacae Tomus XXVI, Archeologický ústav Slovenskej akadémie vied, Bratislava – Nitra 2019 (+ CD–ROM).

Дуже од пола века словачка наука даје важне доприносе изучавањима археологије Авара. Међу најактивнијим прегаоцима на том пољу свакако је Јозеф Забојник из Археолошког института из Нитре. Од многобројних радова у којима је, током своје плодне каријере, умешно обрађивао различите сегменте наслеђа раног средњег века – материјалну културу, погребне обичаје и насеобинску археологију – издвојио бих два често цитирана дела: серијацију авародопских појасних налаза (Zábojník 1991) и монографију о оновременом наслеђу Словачке (Zábojník 2009). Чињеница да је аутор у тој књизи, која је доживела два издања (прво 2004. године), могао да сакупи и размотри главне резултате словачке археологије Авара, сама по себи говори о дометима тамошњих истраживања. Иако већина грађе потиче са заштитних ископавања, Забојник је могао да се ослони на низ темељно испитаних налазишта и претходно објављених монографија, као и на многобројне студије расуте у зборницима и археолошкој периодици. У годинама пред одлазак у пензију – верујем да ће му и она бити активна – аутор се подухватио немалог задатка да монографски објави пет раније истражених авародопских гробаља.

Досад су из тог корпуса објављене две књиге, које су тема овог осврта. У време писања приказа (крајем 2021. и почетком 2022. године), Забојник је предао у штампу публикацију некрополе Велики Медер, док су књиге о познатим гробљима Цифер–Пац и Чатај у припреми. Монографију о некрополи Валалики–Вшехсветих публиковао је у коауторству с покојним Јулијусом Берешом (1939–2013), директором Археолошког института Словачке академије наука у Кошицама, који је оставио трага пре свега у истраживањима раносредњовековних насеља на истоку земље (*cf.* Béreš 2008). Након предговора, уводна поглавља дају податке о историјату истраживања, стању документације и налаза и положају налазишта (стр. 9–18). Некропола Валалики–Вшехсветих, друга по величини у источној Словачкој, истраживана је током неколико заштитних кампања: најпре крајем педесетих и почетком шездесетих под руководством Пастора, а потом осамдесетих година прошлог века са Берешом на челу. Будући да су откривене и сахране кремираних покојника, налазиште се сврстава у групу биритуалних гробаља са севера касноаварског Каганата (Zábojník 2004). У књизи су обједињени резултати Пасторових (гр. 1/59–96/62) и Берешових ископавања (гр. 1/82–108/84) – како у каталогу, тако и у редизајнираној техничкој документацији и цртежима налаза. Кад се из укупног броја истражених гробова изузму касноантичке и позне сахране, остаје 197 гробова касноаварске некрополе који су представљени на реконструисаном ситуационом плану (obr. 4).

Прва ископавања вођена су у међусобно удаљеним сондама, па се оправдано сматра да је у том појасу некрополе остало неистражених гробова. Документација има много недостатака, цртежи и оријентација рака су шематизовани (за дечје гробове нису ни прављени), недостају фотографије, а скелетни остаци нису сачувани. О полној припадности суди се само на основу гробних прилога, а о животињским костима, углавном овчјим лобањама, на основу сажетих објављених

извештаја. Документација са каснијих ископавања је знатно боља, али су због неповољних метеоролошких услова и временских ограничења неке целине, нарочито коњанички гробови, биле лошије очишћене и илустроване. Као што је и код нас честа пракса, горњи слој се уклањао механизацијом, па је могуће да су оштећене неке плиће раке, мада је закључено да су на истраженом простору документоване све сахране. Скелети су лоше очувани, али је приложена антрополошка анализа, уз специјалистичке металографске анализе и анализе остатака дрвета, текстила и перли. Покретни налази су углавном сачувани и смештени у разним институцијама. Базе података о гробовима, прилозима и скелетним подацима приложене су на компакт-диску.

Село Валалики налази се у котлини, око 10 km јужно од Кошица, и „екстремно је богато археолошким налазиштима", од неолитских до касносредњовековних. Уз некрополе Кошице–Шебастовце I и Кехњец, гробље Валалики–Вшехсветих сведочи о аварском присуству у овој области на северној периферији Каганата. Други део назива локалитета (*Сви свети*) и позни гробови наговештавају да је на том месту постојала и црква, што делује вероватно с обзиром на микротопографску повољност положаја. Налазиште је смештено на брегу речне терасе над десном обалом Хорнада, у западном, вишем делу села, на к. 188 m, што се бележи и на старим картама (obr. 1–3); избор локације одговара општим геоморфолошким условљеностима насељавања које су установљене на југу Каганата (Bugarski 2008). Педолошки покривач се састоји од хумусног слоја дебљине око 30 cm, мрке песковите земље (око 50 cm) и жуте пескуше у којој се очитавају раке – због тога није било могуће документовати ивице плићих, нарочито дечјих гробова. Песковита испуна рака пропушта воду, па су кости слабо очуване, док концентрација микроорганизама и киселост хумуса такође може неповољно да утиче на тафономску слику, као и распадање гробних конструкција, рад лисица, глодара и сл.

Ради уједначавања описа из документације, каталог гробова је сажет, али садржи све неопходне податке. Испод ознаке гроба и позива на илустрације даје се, где је могуће, полна и старосна припадност покојника, а потом рубрике с подацима о изгледу и димензијама раке, начину сахране, оријентацији и распореду гробних прилога, закључно са описом, мерама и нумерацијом илустрација појединачних налаза (стр. 19–49). Поглавље о погребном ритуалу отпочиње уопштеним теоријским уводом (без пратећих напомена) о мањкавостима археолошког гробног записа и могућностима његове интерпретације, да би се аутор определио за комплексну анализу података у културно-историјском кључу, тј. у духу „традиционалног разумевања анализе погребних обичаја", која би требало да осветли друштвене повезаности покојника на некрополи и шире. Ваља се ипак сетити старог упозорења Петра Томке да представе о неком друштву које превасходно проистичу из сагледавања гробаља – у овом случају аварског – могу да буду искривљене (Tomka 1986, 155). Од 197 авародопских гробова, 188 чине скелетне сахране. Преосталих девет гробова садржи остатке спаљених покојника – пет у ракама и четири у урнама. Покојници су углавном полагани у засебне раке, уз 11 двојних сахрана (*cf.* Balogh 2006). Некропола Валалики–Вшехсветих сврстава се у касноаварска гробља с великом заступљеношћу коњаничких сахрана. Има их чак 39 (19,8%). У шест таквих целина нису нађене људске кости: или су пропале, што се чини мање вероватно, или је реч о сахранама коња. Скелетних остатака нема ни у шест обичних рака.

И поред описаних ограничења у документацији и стања скелета, аутори су се потрудили да реконструишу полну и узрасну слику гробља. Осим на основу антрополошких анализа, дечји и јувенилни узраст је одређиван према димензијама рака, а пол у односу на гробне прилоге. То је уобичајен поступак у случајевима када антрополошка документација није потпуна, примењиван и приликом анализе авародопске грађе са нашег простора (Бугарски 2009а, 84–85). Требало би ипак скренути пажњу да се налази карактеристични за особе женског пола – и то као једини „полно осетљиви" прилози – срећу у појединим аварским гробовима у Трансилванији који су на основу антрополошких анализа приписани мушкарцима (Cosma 2020), док је управо на тлу Словачке регистровано 26 коњаничких сахрана особа женског пола, од којих неке, опет, не садрже „женске" прилоге (Čilinská 1990). Ипак, такви изузеци вероватно не би знатно утицали на установљене статистичке односе. Полно је одређено 29 сахрана мушкараца и 26 жена, уз чак 71 дечји гроб (36%); установљена су и четири покопа јувенилних особа. Није утврђен пол 34 одрасле особе, а у четири случаја нису одређени ни пол ни старост. Резултати антрополошке анализе су нешто другачији. Испитани су земни остаци 97 особа, од којих је мало више припадало особама женског пола. Није установљена полна припадност осморо одраслих, те ниједне од 45 младих особа (54,64%: стр. 269–289). Ако се има у виду начин ископавања, број дечјих гробова је био још већи, па аутори с правом истичу високу смртност најмлађих у раном средњем веку, дајући пример некрополе Кошице–Шебастовце I са чак 52,6% сахрањених из те старосне групе. Слични проценти су утврђени и на раносредњовековним гробљима ван аварског простора (Štefančič 1988: 66).

Гробље Валалики–Вшехсветих је прво на истоку Словачке на којем су констатовани „прави" (*regulárne*) гробови кремираних покојника. Кости су откривене у плитким јамама (гр. 2/59, 4/59, 9/60, 15/60 и 50/61), каткад груписане, па се претпоставља да су биле стављане у реципијенте од органског материјала. С друге стране, у гр. 20/60, 40/61, 76/62 и 17/83 остаци покојника су били похрањени у урне, мада се због стања документације оставља извесна резерва. Плитких гробова спаљених особа морало је бити више: чини се да су многи уништени приликом орања. Занимљив је закључак да су, макар у неким случајевима, људски остаци били полагани у оштећене посуде (стр. 50–52).

Кад је реч скелетним сахранама (стр. 52–56), преовлађују правоугаони (ређе трапезоидни) укопи, с дужим странама рака у распону 0,8–3,6 m и краћим од 0,4 до 2,4 m. Најмање раке припадају дечјим а највеће коњаничким гробовима. Углавном су вертикалних страна, понекад повијених. Због начина ископавања, дубина укопа није мерена у целости. Ипак, 22 раке су дубље од 2 m. Према очекивању, део тих гробова је имао богатије прилоге – на некрополи Нове Замки углавном је установљена корелација између дубине укопа и вредности гробних инвентара (Čilinská 1966, 23, 107–108). Међутим, остали дубоко укопани гробови дали су сасвим скромне налазе, док су коњаничке сахране 5/82 и 101/84 без прилога. Исти феномен се прати на гробљима у

области Комарна: аутори наводе подстицајна размишљања да су такве целине могле да садрже несачуване луксузне прилоге од органских материјала или сликане ковчеге. Неки коњанички гробови на некрополи Валалики–Вшехсветих били су плиће укопани (29/83, 40/83, 46/83 и 61/83) – они се групишу у северном делу гробља и другачије су оријентисани од осталих коњаничких сахрана, у оси североисток–југозапад. Због недостатка и скромности прилога, није могуће утврдити да ли се они издвајају и по времену покопа. Требало би додати да дубина укопавања раке указује на труд (утрошак времена) заједнице, па би је ваљало узети у обзир у расправи о социјалним статусу покојника. Зашто тај сегмент сахране није увек био праћен „одговарајућим" обиљем и вредношћу прилога, питање је на које археологија тешко може да дâ одговор, посебно не обавезујући. Чини се да би те аспекте (авародопског) сахрањивања требало пратити на локалном или регионалном нивоу, где би до изражаја могао да дође Балинтов хронолошки приступ (Bálint 2019; уп. Бугарски 2020).

И поред недовољне очуваности гробних конструкција, примећено је да је дубока рака коњаничког гроба 104/84 била укопана „на банак", тако да њене странице прихвате покривач од дасака. Поједини испусти у ракама, често уз краће странице, не могу да се тумаче на исти начин јер су установљени при дну укопа. У неколико случајева (гр. 44/61, 73/83, 88/84 и 98/84) уочене су дрвене конструкције уз ивице рака, скоро све причвршћене гвозденим оковима, које су више или мање сужавале гробне коморе. Налази таквих окова у авародопским и познијим гробовима, такође, упућују на сахрану у ковчезима; помало збуњује што је на овом месту описана и конструкција модерног гроба 77/62. Гроб 73/83 био је опремљен и угаоно постављеним дирецима, изван саме гробне коморе, што такође представља уобичајену гробну конструкцију (obr. 5–6). На дну јаме оштећеног гроба 91/84, испод скелета коња, уочен је танак појас црвено гореле пескуше. Зоне другачије земље испод покојника у неколико касноаварских гробова у Бечеју протумачене су као остаци даске или кожне подлоге (Микић Антонић 2012, 80). За разлику од гробља Валалики–Вшехсветих, околност да су раке биле укопане у песковиту земљу обезбедила је поуздане реконструкције гробних конструкција на неким другим оновременим некрополама (*cf.* Ricz 1985; Scharrer- Liška *et al*. 2015).

Одељак о оријентацији рака (стр. 56–58) отпочиње прегледом пракси археолошке документације, при чему се истиче покушај Фалка Даима да и тај параметар искористи за датовање целина на некрополи Леберсдорф у Аустрији (Daim 1987). Оријентација гробова вероватно је имала неки значај који нам данас измиче – макар уколико не уважимо предлог Петера Томке да је зависила од периодичних промена магнетног пола и, последично, смера ветрова (Tomka 1986, 165). Изражено је и мишљење да се мања одступања од „ритуалне оријентације" могу објаснити „једино" тиме што су стране света одређиване према излазећем сунцу, које је у току године само два пута на истом месту на хоризонту (Ковачевић 1977, 201, сл. 140). С друге стране, морамо имати у виду да је положај раке могао да прати правац претходних укопа. Како год било, на тлу данашње Словачке су установљене три групе авародопских гробаља у односу на оријентацију гробова. Најбројнију чине некрополе са гробовима у оријентацији северозапад–југоисток, док гробље Валалики–Вшехсветих, где је вршена детаљна анализа оријентација рака и скелета, припада другој групи налазишта, с гробовима оријентисаним у оси исток–запад (diagram 1–2). Положају покојника посвећено је мање текста (стр. 59). Углавном су сахрањивани на најуобичајенији начин, с рукама опруженим поред тела или понекад на карлици. Приљубљеност удова може бити последица сахране у уском гробу и(ли) сандуку, односно умотавања покојника у покров, што се често бележи на читавом аварском простору. Значајно одступање је уочено у гробу детета 39/83, старости око 1,5 године, које је покопано потрбушке, с прекрштеним ногама, и које је можда било подвргнуто трепанацији. Примера ради, двогодишње дете на раноаварској некрополи Чик такође је било сахрањено потрбушке (Бугарски 2009а, 81; о случајевима трепанације у аварско доба в. Bereczki *et al*. 2010, Premužić *et al*. 2016). Старија жена из гроба 99/84 била је покопана у згрченом положају и по свој прилици везана, док је старији мушкарац из малог гроба 53/83 вероватно био сахрањен у седећем положају. О таквим сахранама, познатим пре свега из Азије, код нас је писала Лепосава Трбуховић (1980, 124), а касноаварска сахрана у седећем положају можда потиче из Бајмока (Риц 1997, 204).

Према студији Петера Томке, двојни гробови су били заступљени са 1–2% у укупном збиру сахрана на тлу Каганата, што одговара археолошкој слици из других периода (Tomka 2003). Пол и узраст сахрањених не показују нарочите правилности па су такви гробови, од случаја до случаја, различито интерпретирани (Grefen-Peters 1992). У односу на општу слику, проценат двојних сахрана на некрополи Валалики–Вшехсветих је већи, јер их је документовано десет (11?). У пет гробова била су покопана по два детета, у два одрасле особе с децом, а у три случаја су забележене двоструке сахране одраслих особа. Врло је важно објашњење да је чак седам двојних сахрана установљено током антрополошке обраде. Узрок је у слабој очуваности скелета и оштећењима гробова, а последица мора бити опрез приликом „чисто" археолошке анализе некропола јер су се, у овом случају, само у гробу 44/61 јасно показали скелети жене и детета. Будући да у већини таквих гробова на публикованом налазишту нема прилога, или су врло скромни, вероватно не би могло да се помишља о истицању друштвеног статуса преко примењеног ритуала (стр. 59–60). Сличну процентуалну, старосну и археолошку слику дају, рецимо, двојни гробови са некрополе Арадац (Нађ 1959, 49–55). Већина коњаничких гробова била је оштећена (стр. 60). Само девет њих је нађено нетакнуто, док је гроб 85/83, најбогатији на некрополи, оштећен у мањој мери. У добро сачуваним гробовима, покојници су по правилу лежали у јужном или југозападном делу раке а коњи, супротно оријентисани, с њихове десне стране. Такав положај одговара типу I коњаничких сахрана по класификацији Атиле Киша. Иако је у позноаварском периоду било заступљено мање варијанти коњаничких сахрана него раније, што се може тумачити и уједначенијом етничком сликом, нису установљене апсолутне законитости у спровођењу ритуала. Та стара оцена (Kiss 1962, 161) на снази је и данас. Проценат коњаничких гробова на анализираној некрополи (19,8%) знатно премашује процену укупног удела таквих целина широм Каганата – око 10% (Bede 2012, 43, 46–47, n. 10) – па би и у овом случају ваљало приступити хронолошкој анализи.

И поред лоше очуваности, испитани су скелети 22 коња, уз сажету публикацију археозоолошке анализе. Девет коња било је старо између шест месеци и пет година, а десет између шест и десет година; само је коњ из гроба 77/83 био старији од 20 година. Одређен је пол десет пастува (Müller, Ambros 1994, 129–131), тако да није утврђено присуство кобила које су у Комарну сахрањиване у женским коњаничким гробовима (Čilinská 1990, 136). На шест скелета примећени су трагови убијања животиња. Занимљива је примедба да 12 од 13 окованих ведрица на некрополи потиче из коњаничких гробова. Будући да су обично прављене од тисовине (*Taxus baccata*), која наводно испушта отрове на које су коњи нарочито осетљиви, сматра се да животиње пре клања бивале омамљене водом из њих (Ambros 1993, 116). У шест случајева ведрице су биле уз лобање коња, док је у гробу 24/60, према документацији, лобања била одвојена од скелета животиње и положена у реципијент. Иако је приликом усвајања сличних интерпретација нужан опрез, описана анализа свакако говори у прилог свеобухватном, интердисциплинарном разматрању археолошке грађе. Код нас су, нажалост, археозоолошка испитивања аваародопских остатака тек у повоју. Светлана Блажић је још 1980. године обрадила кости са некрополе у Бечеју (Микић Антонић 2012, нап. 1), у новије време су вршена испитивања животињских – и коњских – костију са великих касноаварских гробаља у околини Новог Сада (заштитна ископавања Душанке Веселинов), али су досад објављене само анализе скелета коња из Обреновца (Марковић 2013; Marković *et al*. 2015: изостала је археолошка публикација).

Неколико гробова с прилозима, без људских костију, могло би да се припише деци чији се земни остаци нису сачували до времена археолошког ископавања. С друге стране, документована је изузетно велика рака гроба 45/61, који је био означен као кенотаф (*cf.* Novotnik 2011; Ďuricová 2014). У гробу је нађен само један коњски зуб. Аутори нису сигурни да ли је заиста реч о симболичкој сахрани, потпуној декомпозицији скелета или чак последици неадекватног ископавања и документовања: последње две могућности делују мање вероватно. У гробовима 11/60, 38/61 и 64/83 нађене су само животињске кости. Потом се дискутује о оштећењима гробова, која могу бити савремена или оновремена – у другом случају, могла су настати због пљачке или из ритуалних разлога („негативна" или „позитивна" мотивација; *cf.* Aspöck 2018). Гробове су могли да похарају странци, али су такве целине често оштећене управо на местима где се очекују највреднији прилози, што би говорило о доброј обавештености, тј. домаћој изведби. Оштећења рака из ритуалних разлога вероватно би такође представљала траг деловања локалне заједнице. Таква штета је најбоље документована у гробу 72/62 (T. XLVIII, 72/62). На некрополи Валалики–Вшехсветих затечен је чак 61 оштећен гроб. Само у два случаја оштећења су скорашња, док су остали гробови вероватно ремећени из ритуалних разлога. Сматра се да пљачка није била узрок оштећења јер нису диране најбогатије целине. Међутим, од 39 коњаничких гробова само девет је остало нетакнуто – вероватно су и неки од њих били раскошније опремљени. Оштећења настају и приликом укопавања млађих гробова, али у тим случајевима (гр. 4/82 и 5/82, 48/83 и 51/83, 102a/84 и 102b/84) нема хронолошки осетљивог инвентара који би помогао у рашчитавању стратиграфије (стр. 61–64).

Одељак о гробним налазима отпочиње дискусијом о *прилозима* (непропадљиви делови одеће, личне опреме, накита, наоружања и сл.) и *даровима* (посуде које су садржале храну или пиће, животињске кости као остаци попудбине или пак у симболичкој улози: *cf.* Kroll 2013). Прилози у „функционалном" распореду, попут остатака појасне гарнитуре у пределу карлице или наушница уз лобању, свакако су представљали део ношње. Међутим, такви налази могу бити положени у другачијем распореду – тада и њих можемо посматрати као дарове, чак не нужно ни као делове ношње који одређују пол сахрањене особе (стр. 73; *cf.* Bugarski *et al*. 2013, 295–296). Додајмо да „функционални" распоред прилога не би требало мешати са терминологијом Хајнриха Харкеа, који је у свом утицајном теоријском раду археолошки гробни запис рашчланио на *намерне* (*intentionale*) и *функционалне* податке. Први представљају прилоге које (на један или други начин) полажу ожалошћени, док се у друге убрајају скелетни остаци који говоре о животу покојника на начин који није замагљен ритуалом сахране (Härke 1993). Због пљачке и начина покопа, чак 56 (28%) гробова на некрополи Валалики–Вшехсветих не садржи покретне налазе, док су у 14 гробова нађене само животињске кости – то су углавном дечји гробови. Таква попудбина потиче из укупно 36 гробова. Археозоолошке анализе углавном нису биле вршене, док се у документацији у већини случајева кости не опредељују према врстама. Знамо тек да су остаци овце/козе нађени у осам гробова, а перади у пет. Кости говечета нађене су у једном гробу, док су у гробу одрасле особе 57/61 била приложена два јајета. Лобање животиња потичу из 31 гроба и махом нису разврстане. Занимљив је, али вероватно не довољно поуздан, покушај аутора да их определе према величини на цртежима основа гробова: тако посматрано, већина би припадала овцама/козама, чије лобање представљају уобичајен прилог на аваародопским некрополама у данашњој Словачкој.

Кад је реч о покретним налазима, већина гробова садржи скромне прилоге попут копчи, ножева или врхова стрелица. У неоштећеним целинама налази су углавном у „функционалном" положају (стр. 64–65). Најпре су представљене појасне гарнитуре, најрепрезентативнији и најуже датовани аварски налази. Препознатљиви језичци, копче и окови потичу само из седам укопа (22/60, 24/60, 42/61, 54/61, 74/61, 85/83 и 98/84); поједини облици нису били уврштени у серијацију Јозефа Забојника (Zábojník 1991). Од набројаних гробова, шест су коњанички. Док из гроба 74/62 потичу делови појаса чије изворно датовање не пада у исте фазе касноаварског периода (што није реткост), преостали комади се датују у јасно одређене временске одсечке. Гроб 98/84 је из фазе SS II (720–750) и представља једну од најранијих сахрана на некрополи, а остали махом из друге половине 8. века, попут најбогатијег коњаничког гроба 85/83. Појасни налази из гроба 42/61 датују се до почетка 9. столећа. Међу налазима оружја доминирају врхови стрелица, забележени у 21 гробу (13 коњаничких). Најчешће су прилагане појединачно, махом су у облику ластавичјег репа и каткад тордиране; забележена су само два тробридна врха. Различита копља, нађена у шест коњаничких гробова, припадају уобичајеним типовима. У ту групу предмета треба сврстати и налаз из гроба 95/84, уз снажну резерву опредељен као пробојац (T. CIX/95/84:2), који заправо представља

петицу мањег пројектила. Ти шиљати предмети су вековима служили као ојачања доњих делова држаља оружја (*cf.* Бугарски 2009b, 430–431), али се неретко ни у најновијој литератури не препознаје њихова функција (*e.g.* Дрёмов, Круглов 2021).

Налази сечива и секира су документовани у по четири сахране. Уз несачувану сабљу и палаш, нађена су два сакса. Три сечива потичу из целина с појасним оковима, што је честа комбинација још од средњоаварског периода (Csiky 2015, 362), а једно из коњаничког гроба 84/62 који се на основу орме датује у другу половину 8. века. Секире су различитих облика. Налази из (авародопских) гробова се углавном тумаче као оружје, чему се приклањају и аутори књиге. У прилог таквом одређењу овде сведочи мала дужина налаза – до 15 cm (Bugarski 2015, 139–140; *cf.* Szücsi 2014). Опредељивање сечива у групу бојних ножева је сложено и често субјективно. Аутори, а међу њима и Забојник, нуде различите параметре. Главни је свакако величина предмета: с временом се углавном остало на дужини сечива, без трна. Ако као референтну узмемо поделу Гергеља Чикија, у бојне ножеве се сврставају налази са сечивом дужим од 20 cm (Csiky 2012, 377, n. 32; *cf.* Bugarski 2015, 141). Ниједан налаз са некрополе Валалики–Вшехсветих не испуњава тај критеријум, а посебно не нож из гроба 85/83, чије је сечиво дугачко тек 12,5 cm. Најдуже је сечиво из целине 99/84 (преко 18 cm), али се аутори питају да ли би налаз из гроба старије жене могао да се определи као бојни нож. У овом случају мора се упозорити на мешану аргументацију, на трагу у основи застарелог мишљења да оружје у гробу превасходно представља ратничку опрему коју је покојник користио током живота. С тим у вези, у десет целина су документоване комбинације оружја, најчешће сечива са стрелицама, које не би требало тумачити као функционалне борбене сетове (Csiky 2015, 389–390; *cf.* Bugarski, Ivanišević 2018, 314–316, Tab. 1). Три коштана предмета из гроба 24/60 нису оплате рефлексног лука (стр. 65–70, 76).

Опрему коња чине функционални комади, попут узенгија, жвала и копчи седла, и статусно и хронолошки изражајни украси орме. Жвале су једноставне, завршене алком, или сложеније, с равним псалијама. Потичу из истих 11 целина у којима су нађене узенгије. Парови се, изузев у два гроба, састоје од истих стремена – најзаступљеније су касноаварске узенгије с тзв. омега петљом. Копче седла и орме су најчешће гвоздене, правоугаоног или трапезастог облика, различитих величина и без хронолошког значаја. Комади орме су прављени од лима и каткад посребрени. Нађени су у десет гробова, од којих најбогатији нису били оштећени (гр. 24/60, 42/61, 84/62, 85/83 и 98/84). Розете су налажене у пределу лобање коња, што значи да су красиле узде – на другим гробљима се бележе и у различитом распореду. Углавном су кружне, са испупченим средишњим делом. Украшени су, сложеним флоралним мотивом, само парови фалера из гробова 95/62 и 98/84; нађена је и гвоздена фалера са бронзаним централним делом (*cf.* Čilinská 1961). Мање розете се јављају у више варијанти: могу бити глатке или с калотом издељеном у шест поља, од којих неке имају венце псеудогранула. Поједини лимени окови орме су правоугаоног облика, украшени отиснутим геометријским мотивима, а међу најмлађима су тзв. четворолучни (*vierbogiger*) ливени окови, какви су налажени широм Карпатске котлине. На Тисафиреду се датују у последњу петину 8. века (Garam 1995, 360, Abb. 216/16, 18, 19; 254), а код нас се срећу у Челареву (Bunardžić 1985, Cat. 409–410, Fig. 30/2, 7). Прапорци потичу из четири коњаничка гроба. На другим налазиштима су познати и из женских и дечјих гробова и такође се датују позно, с тежиштем у последњој четвртини 8. и на почетку 9. века (Daim 1987, 159, Abb. 29; Garam 1995, 342, Abb. 200/10, 254). У занимљивом екскурсу аутори претпостављају да су прапорци у гробу 98/84 били пришивени за појас испод лимених украса орме (стр. 70–73). Врло су подстицајна нова акустичка испитивања прапораца са гробаља у Комарну, која су показала да је налаз из једног дечјег гроба био сасвим тих, као амајлија, док је најгласнији нађен у коњаничком гробу. Можда су, дакле, имали различиту функцију (Pomberger *et al*. 2021), где би звук прапорца орме имао психолошку улогу у боју.

Појединачно или у пару, наушнице су документоване у 20 гробова – према антрополошкој анализи, искључиво особа женског пола. Уобичајене су једноставне бронзане каричице, каткад с коленцима или тордиране. Алке су могле да носе привезак са стакленом перлом. Једноставан облик одговара комадима типа IIa са некрополе Нове Замки, где се датују од 650. до 725. године (Čilinská 1966, Typ. IIa, Abb. 11), али сматрам да то не важи за наушнице из гроба 44/61, чији привесци висе о елипсоидној алки с коленцима (T. XXXV/44/61:1), што је познија форма. У неколико случајева, један крај глатке каричице био је обликован у виду коничног или цилиндричног навоја. Такви примерци се на некрополи Нове Замки датују у 8. и прву четвртину 9. века (Čilinská 1966, Typ. V, Abb. 11). Декоративнији комади са елипсоидним ливеним алкама ромбоидног пресека, коленцима и перлама потичу из гроба 80/83. Одговарају типовима IIIa и IIIc са гробља Нове Замки, где се датују од 725. до 825. године (Čilinská 1966, Typ. IIIa, IIIc, Abb. 11). Оцењено је да је репертоар наушница скроман и да не пружа оквире за ближе хронолошко одређење гробова, мада се у новијој литератури нуде ужа датовања. На репрезентативној некрополи Тисафиред, наушнице типа IIa по класификацији Злате Чилинске одређују се од 670. до око 730. године, а оне њеног типа V знатно уже, тек од почетка 9. века (*cf.* Garam 1995, Abb. 254). Оцењено је да су наушнице из гроба 104/84 јединствене на простору Каганата, јер им је кружна алка направљена уплитањем двеју жица различитих боја. Премда се расправља о слично израђеним алкама, сачувана сферична перла је од сребра а не од стакла (стр. 73–75, obr. 7). Разнобојне стаклене перле нађене су у 17 гробова, често у комбинацији с наушницама. Примерци у облику семенки лубенице су углавном црне боје, док међу вишечланим цилиндричним перлама има и оних са златним премазом. Аутори сматрају да ни перле не омогућавају прецизније датовање целина. Нешто ужа хронологија успостављена је за одговарајуће налазе из Тисафиреда, који се збирно датују у другу половину 8. века и касније (*cf.* Garam 1995, Abb. 254). Документована су само два прстена, ливени бронзани из женског гроба 72/62 и прстен од сребрног лима из гроба 89/84, који нису подробније обрађени (стр. 75).

У расправи о „предметима свакодневне употребе" (стр. 76–78), писци обрађују сасвим различите налазе који се обично воде под категоријама *прибора*, *ношње* и *алата*. Уобичајени гвоздени ножеви потичу из 42 гроба, од којих

неки припадају особама женског пола. Сматра се да они представљају најелементарнију својину слободних припадника аварског друштва (Ковачевић 1977, 102). Затим се наводе налази обичних гвоздених копчи из 43 гроба. Оне нису хронолошки индикативне, будући да се веома често налазе широм Каганата, у свим периодима аварске превласти; није јасно зашто нису представљене међу деловима одеће. Слично би важило и за једноставне гвоздене алке. Од укупно шест примерака, три се јављају као комади орме: истоветне алке су се свакако користиле и на друге начине. Нађен је само један биконични пршљенак. Кресива и кременови су регистровани у шест, односно 12 гробова: та диспропорција није нарочито важна јер је било који гвоздени предмет могао да се користи као оцило. Махом су полагани у гробове мушкараца различитог узраста. Једини срп потиче из гроба 88/62. Био је положен преко карлице особе неодређеног пола, адолесцентног или зрелог узраста (из исте целине су наушница и нож: Т. LXVI/88/62). Без веће расправе се преносе анализе Жужане Борозове, где се истиче старо тумачење да су српови полагани не би ли се спречило повампирење, док се оправдано сумња да су били коришћени као оружје. Велика већина тих алатки из аварских гробова у Словачкој је нађена у равницама близу река (*cf.* Borozová 2006). Без обзира на додатне – и мање вероватне – могућности интерпретације, српови представљају вредно сведочанство пољопривредне делатности аварске популације, која се често опредељује као номадска (*cf.* Бугарски 2009a: 138–139).

Предмети од кости заступљени су пробојцима (?), који су налажени само у коњаничким гробовима: више таквих налаза потиче из гробова 42/61 и 74/62, а један из богате целине 98/84 (Т. CXI/98/84:7). Намена тих предмета није јасна. С обзиром на паралеле из других целина у Словачкој, разложно је претпостављено да су чинили део опреме коњаника, али су доста крхки у односу на релативно сличне предмете од рога, тзв. алатке за дрешење чворова (*cf.* Бугарски 2009a: 124–125). Из разноврсног инвентара коњаничког гроба 85/83 истиче се и неукрашен реципијент од рожине, који би припадао „типу" Y одговарајућих предмета. Углавном се сматра да је у њима чувана со. Та подела, међутим, тешко може да се прихвати као право типолошко разврставање, јер је узрокована обликом самог рога а не деловањем занатлија. Позивајући се на збирку из Микулчица и један старији попис, аутори оправдано сматрају да ти предмети не могу да се користе за прецизно датовање целина: гроб 85/83 је на основу појасних налаза датован у другу половину 8. века (стр. 77–78). У новијем прегледу Јануша Горецког прикупљено је 110 (рано)средњовековних реципијената за со, с датовањем од 7. до 13. века. Већина гробних налаза је перфорирана и нађена у пределу карлице, па је јасно да су ношени о појасу, мада је налаз из једне средњоаварске целине из Беча са седла (Górecki 2005, 95, 129). На приложеној основи гроба није забележен положај налаза (Т. XCVIII, CII/6). Налазима кружних окова ведрица посвећено је, на први поглед, несразмерно пуно текста у односу на речитије гробне прилоге (стр. 78–80). Аутори су мерили њихове пречнике ради реконструкције облика и димензија дрвених реципијената. Окови су прављени савијањем гвоздених трака ширине 1,5–3 cm у кружнице, углавном по три – пречника од 15 до 40 cm – тако да ведрице нису биле цилиндричне, већ облика зарубљене купе. Четири сачуване гвоздене дршке указују на обим ведрица при врху (16–23 cm). Карактеристични окови дршки у виду ластавичјег репа такође потичу из четири гроба. Они могу бити и познији: кратка расправа о раносредњовековним ведрицама прати публикацију таквог налаза из Винче (Вујовић 1994). На основу појасних налаза, ведрице са некрополе Валалики-Вшехсветих се датују од друге четвртине и кроз другу половину 8. века, што је чак уже него у Тисафиреду (*cf.* Garam 1995, Abb. 254).

Потом се расправља о керамичким посудама из 27 гробова (13,6%). На северној периферији Каганата, само је на гробљу Леберсдорф (Daim 1987) нађено сразмерно мање лонаца. Већина посуда била је положена у гробове деце и јувенилних особа. Само су у гробу 2/59 нађене две посуде, али ту је реч о сахрани кремираног покојника; у лонац из гроба 76/62 стављене су неизгореле кости одраслог покојника. Све посуде су украшене, нема примерака тзв. жуте керамике, а чини се да су сви лонци били рађени на витлу осим, можда, два примерка. На такву могућност, осим саме форме, упућивали би и врло грубо изведени украси (Т. XLI, 55/61:1; LXXXV, 62/83:1). Лонци су уобичајених димензија. Иако има и нижих од 10 cm, већина њих је висине 12–14 cm (tab. 3, diagram 3). Урне из гробова 20/60 и 76/62 су више од 20 cm, што је у складу с приложеним прегледом димензија урни на северу Каганата. На сл. 8 даје се табеларни приказ декорација, које су распоређене у шест група (A–F). Украси су извлачени зашиљеним инструментом или чешљем, у виду засебно изведених или комбинованих водоравних линија и валовница. Групу D чине урезани и пунцирани цикцак украси. У испунама рака налажени су и појединачни уломци, углавном раносредњовековни али и два касноантичка, а у гробовима 22/60 и 14/60 и по једна фибула, односно касноантички прстен. Због стања документације, писци се нису изјаснили да ли је и фибула у гроб доспела случајно, или је пак представљала гробни прилог. Прстен је, међутим, нађен у пределу шаке (која недостаје), па може да се протумачи као нађена старина која је потом била ношена као накит (Т. VII/14/60). Сем цитиране литературе, о прилагању старијих предмета у авародопске гробове пише и Анита Рапан Папеша (Rapan Papeša 2020), која такође прави разлику између налаза који су задржали изворну функцију и оних који нису имали практичну вредност, већ су вероватно били прилагани ако амулети (или играчке). Разматрања исте праксе на англосаксонским гробљима су слојевитија, јер се размишља и о тежњи за истицањем друштвеног статуса појединаца који се испраћају са старинама и њихових породица (*cf.* Costello, Williams 2019). У наставку се обрађује шест гробова из новог века, којима се нећемо бавити (стр. 84–85).

На наредне две странице обрађују се релативна хронологија авародопског материјала и апсолутна гробља Валалики–Вшехсветих. Расправа полази од основне поделе на три фазе коју је формулисала још Илона Ковриг (Kovrig 1963). Питање је у којој мери је овакав увод био неопходан, сем што вреди подсетити да се њена периодизација – у основном облику – потврдила и након важних рачунарских серијација израђиваних током последње две деценије прошлог века, које се користе и данас. Пада у очи да се, с правом, цитирају остварења аустријских археолога Фалка Даима и Петера Штадлера, као и спомињана серијација самог

Јозефа Забојника, али се у овом контексту не наводи кључна публикација некрополе Тисафиред (Garam 1995). Нешто више простора заузима расправа о почетку средњоаварског периода (око 650. или 670. године), при чему се аутори залажу за старији датум. Данашња Словачка углавном баштини касноаварску оставштину, док су на некрополи Валалики–Вшехсветих заступљене целине из последња три (од четири) одсечка позне фазе: стога на овом месту нема разлога за дискусију о хронологији претходних фаза. Разлагање хронологије самог гробља отежано је тиме што је мало налаза који омогућавају финије датовање. На неколико места сам се осврнуо на ужа временска одређења појединих предмета која се нуде у литератури, али је могуће да писци – без сумње веома упућени – те студије не сматрају сасвим релевантним за север Каганата. Стога се датовање врши пре свега на основу малобројних појасних налаза, а према Забојниковој типохронологији (Zábojník 1991). То је изведено сажето, без детаљније расправе о појединим типовима. Гроб 98/84 је, поновимо, из друге четвртине 8. века, што би одговарало најстаријем хоризонту сахрањивања. С обзиром на налаз окова серијацијског типа 547, могли бисмо га прецизније датовати у крај фазе SS II. Следећој фази – SS III (750–780) – одговарали би гробови 24/60, 54/61 и 85/83. У последњу фазу, SS IV, тј. у последњу четвртину 8. века, датују се појасни налази из гроба 42/61. Датовање некрополе од око 730. године до конца 8. века одговара установљеној археолошкој слици у рејону Кошица, где се не бележе гробови раног 8. века, из фазе SS I.

У сведеним завршним разматрањима понављају се опаске о методологији истраживања и документовања те проблемима с којима су се аутори суочавали приликом реконструкције ситуационог плана. План је одштампан с нешто другачијим ознакама гробова, што због основне нумерације рака не представља потешкоћу (obr. 9). Хоризонтална стратиграфија је представљена сажето. На основу положаја гроба 98/84, али и оближњих укопа 96/84 и 104/84 са карактеристичним наушницама, закључено је да је некропола била формирана у западном делу испитане површине. Потоњи развој није лако разлучити. На истоку се налази гроб 74/62, у којем је, како је већ напоменуто, затечен инвентар различитог датовања. Напоменуо бих да копча са лименим оковом одговара серијацијском типу 119 с прелаза фаза SS I и SS II, док карактеристичан oков у виду елисе пропелера припада типу 547, који се датује у прелаз између фаза SS II и SS III (*cf.* Zábojník 1991). Датовање целине се изводи према млађем налазу, па не чуди понуђено сагледавање места овог гроба на некрополи. Ипак, из те целине потиче и прапорац, који би могао да буде још познији: не треба заборавити да појасне гарнитуре састављене од комада различитог датовања могу бити млађе од времена производње најмлађег члана. Код нас се тим размишљањима својевремено посветио Ђорђе Јанковић (2003, 101–104), што треба истаћи и поред погрешних закључака о касноаварском гробљу у Новом Сланкамену.

Између прве групе покопа и гроба 74/62 налази се гроб 54/61, јасно одређен у фазу SS III, што речитије одражава след сахрана. Гроб 22/60, датован још једним примерком серијацијског типа 547, налази се у североисточном делу некрополе, близу гроба 24/60, а нешто северније од њих је гроб 42/61, можда најмлађи на некрополи. Аутори наводе да остале сахране није могуће овако разврстати. Додајмо да то што је ситуациони план, и поред великог труда аутора, нужно шематизован, онемогућава макар провизорно датовање околних гробова према оријентацији, али можемо покушати да допунимо стратиграфска разматрања анализом наушница. Рани тип из гроба 70/83 могао би да сврста ту целину међу најстарије на гробљу, али се она налази источније од њих. Кад је реч о покопима са каричицама с навојима, врло позног датовања, гроб 61/61 је заиста један од најисточнијих, али је гроб 34 посред истраженог простора. У њему је нађена и једна тордирана алка, свакако ранијег датовања (Т. XXIII/34/60), па делује да на разматраној некрополи каричице с навојима заиста нису тако уског датовања као у Тисафиреду. У сваком случају, аутори су јасно приказали ширење гробља са запада на исток, с тим што се чини да позне целине инклинирају и ка северу. Потом се посматра распоред гробних прилога. Перле се групишу у западном делу гробља, где се наслућује и извесна концентрација гробова без прилога, који су ипак прилично равномерно заступљени на истраженом простору. Такви покопи се често приписују популацији раног 9. века (obr. 10, 11).

Изостаје анализа распореда гробова спаљених покојника, који се групишу у северној половини источног дела гробља (obr. 9, f). Њима ни у претходном тексту није посвећена већа пажња, већ се спомињу у ширем контексту биритуалних некропола на северу Каганата. Уколико бисмо њихову диспозицију посматрали у светлу изложених утисака о хоризонталној стратиграфији налазишта, припадали би познијој фази коришћења гробља. У тим целинама нема хронолошки осетљивих налаза, па ваља, макар из начелних разлога, задржати извесну дозу опреза приликом стављања биритуалног атрибута. Такав опис би пристајао пре свега гробљима где су оба вида сахрањивања заступљена *у исто време*. У неким случајевима, међутим, установљене су извесне временске разлике, па су у Новим Чаревцима гробови спаљених покојника били оштећени укопавањем касноаварских скелетних гробова (Јанковић 2003, 98–100, сл. 1, 2), док је на референтној некрополи у Покасепетку (Sós, Salamon 1995), која није узета у разматрање, установљено да су гробови кремираних покојника негирали раноаварско скелетно гробље. Главни део текста завршава се оценама да франачки напади, који су довели до краха Каганата, нису битније утицали на простор источне Словачке, прилично слабо насељен и удаљен од центара аварске моћи. Такав степен насељености објашњава се плављеним и гліновитим земљиштем, али се ситуација у великој мери променила у време мађарске доминације. Гушћа попуњеност источнословачке низије у то време тумачи се, без позивања на конкретна истраживања, повољним климатским променама у 9. веку (стр. 88–91, нап. 109). Списак коришћене литературе испуњен је (чехо)словачким, мађарским и аустријским насловима, а након листе скраћеница (стр. 92–97) следи детаљан сажетак на немачком језику, који се тешко прати јер је одштампан врло ситним словима, у густом блоку (стр. 98–112). Квалитетни цртежи предмета дају се на 124 табле. Материјал је распоређен по гробним целинама; на таблама се приказују и основе гробова с распоредом прилога.

Преостали део књиге чине краћи специјалистички прилози. Анализа стаклених перли Људмиле Илашове и Јана

Штубње (Ľudmila Illášová, Ján Štubňa) обухватила је 61 примерак из 16 гробова. Испитивања под лупом и микроскопом су открила многобројне мехуриће у стаклу, настале током производње; по један примерак био је израђен од калцедона и ћилибара. Захваљујући примени раманске спектроскопије потврђено је да коришћено стакло на бази натријума и калцијума, док боја перли потиче од примеса соли бакра, гвожђа и мангана (стр. 237–242). Јана Михајова (Jana Mihályiová) испитивала је трагове дрвета и текстила на предметима од метала. Занимљиви су исходи анализа остатака држаља копаља из гробова 22/60 и 84/62 – прво је било направљено од храста а друго од јавора. Важност закључка огледа се у томе што је донедавно била позната сировина тек 12 авародопских држаља копаља, од којих је само једна била од храста а ниједна од јавора. Те држаље (све са гробаља из данашње Словачке, махом из Комарна) углавном су биле направљене од букве, сребрне јеле или јабуке (Husár 2008; Csiky 2015, 144–145). Тело једне стрелице је такође било од сировине јавора, која је очигледно имала добра физичка и механичка својства за такву употребу. Због стања предмета, анализе остатака текстила нису дале речитије резултате (стр. 243–245). Рендгенску флуоресцентну анализу (XRF) металних предмета извршио је Јан Тирпак (Ján Tirpák). Обухваћено је 20 налаза накита, те 21 појасни комад и 31 украс коњске орме. Резултати су представљени табеларно, док су места узимања узорака приказана на квалитетним фотографијама налаза у боји (Т. I–V). Предмети су прављени од легура сребра, бронзе и месинга. Поред бакра, легуре сребра садрже мали проценат злата. Коришћене легуре биле су уобичајене у време аварске превласти (стр. 246–268).

Антрополошке анализе презентују Тонкова и Вондракова (Mária Tonková, Mária Vondráková). Поред већ представљених основних података, узимане су уобичајене мере лобање и посткранијалног скелета, испитиване су епигенетске карактеристике и вршена је палеопатолошка анализа. И код мушкараца и код жена заступљени су различити облици лобања; просечна висина мушкараца износила је 1,67 m а жена 1,56 m. Антрополошки подаци пружају уобичајену слику авародопске популације на тлу данашње Словачке; нисам компетентан да приказујем епигенетска и палеопатолошка испитивања. Поједине лобање и друге кости су представљене црно-белим фотографијама (стр. 269–289). Књига је завршена извештајем Вањекове (Jana Vaneková) о конзервацији наушнице из гроба 104/84 (стр. 290–292).

* * *

Некрополу Обид Забојник је обрадио у монографији из 2019. године, која је већ укратко приказана (Profantová 2020). Истраживана је у два наврата, с размаком од скоро 20 година, пре постављања иригационих система. Ископавања 1963. године, када је истражено 35 скелетних гробова, водила је Липтакова, а радове вршене између 1981. и 1984. године сам Јозеф Забојник. Тада је документовано 159 гробова, али некропола није испитана у потпуности. Због постојећих зграда, окућница и пута Забојник није успео да установи јужну границу гробља, али се рачуна да је оно било средње величине – до 300 гробова. Резултати првих ископавања објављени су након три деценије, на старински начин, у оквиру опширне студије Антона Точика о средњовековном наслеђу јужне Словачке (Točík 1992, 93–115), док су исходи Забојникових истраживања публиковани у виду годишњих извештаја, што је свакако оставило простора за целовиту монографску обраду. Као и у претходној књизи, састављени су јединствени каталог гробова и ситуациони план, уз поновно илустровање и излагање грађе према уобичајеном распореду. Поред специјалистичких прилога на крају монографије, приложен је компакт-диск са базама података о гробовима, налазима и конструкцијама.

Прва ископавања, вођена у рововима дужине 15–25 m и ширине 1–1,5 m, била су праћена мањкавом документацијом. Није био сачињен потпуни каталог гробова (или макар није сачуван), а раке су приказиване шематизовано. Ситуациони план није био прецизан, што је установљено током ревизионих ископавања појединих гробова и након тога исправљено. У складу са ондашњим могућностима, ни фотографија нема довољно, па се ни на тај вид документације није могло ослонити у потребној мери. Према тадашњој методологији ископавања, земља је грубо уклањана све до појаве скелета, а гробне конструкције нису помно бележене, већ само у четири или пет случајева. Није вршена детаљна антрополошка обрада, па се у публикацији раних резултата пол и узраст покојника спомињу само у неколико наврата. Забојникова истраживања вршена су углавном ручно, такође у систему уданих сонди али с неопходним проширењима и танким профилима (0,5 m), тако да на истраженом простору нема неиспитаних гробова. Те кампање су вођене пажљивије и уз бољу техничку документацију, при чему се истиче допринос тада младог колеге, а данас истакнутог стручњака Габријела Фусека. Нумерација сонди и гробова настављала се на претходна ископавања – до гроба 194. Скоро сви налази се чувају у Археолошком институту у Нитри, а они који недостају су представљени старим фотографијама (Т. XVI/25).

Локалитет се налази у атару села Обид, крај места Нове Замки у рејону Нитре на југозападу Словачке, на 700 m северно од тока Дунава (obr. 1). На подручју села регистровано је неколико вишеслојних налазишта, што се збирно датују од неолита до позног средњег века, али је најзначајније управо авародопско гробље. Уз некрополу су уочени и трагови оновременог насеља, које ће ускоро бити публиковано. Старе карте нису толико детаљне да забележе нешто виши положај гробља у односу на околни терен – центар села је на к. 115 m – али приказују слаб, можда сезонски водоток на западу (obr. 2–4). Некропола је јужно од села, на првој, слабије заштићеној тераси Дунава, па претпостављам да је током већих плављења та зона остајала сува, окружена водом. Иако је положај села свакако повољнији, остаци насеља и гробља јасно сведоче о могућности живота на овом положају. На терену се местимично уочавају набачаји опеке и камена, формирани да се не таложи блато. Ораница дебљине 0,3–0,5 m наслојава лес (0,8–1,2 m), који се простире изнад финог песка.

Након уводних података (стр. 9–15) даје се садржајан каталог гробова, састављен на исти начин као у претходно приказаном делу (стр. 17–56), па се расправља о обичајима сахрањивања. То поглавље отпочиње изношењем речитих статистичких прорачуна. Иако је мање од 15% словачке земље улазило у састав Каганата, до данас знамо за око 6400 гробова са тог простора, што је око 10% укупног броја документованих авародопских сахрана. Тако велики узорак је

изнедрио врло поуздане хронологије налаза, о чему је било речи. С друге стране, погребни обичаји се током два и по века аварске превласти „у значајној мери одликују конзервативизмом”, што говори о постојаности културе. Премда су привлачиле мање пажње од покретних налаза, и праксе сахрањивања су обрађиване у више наврата (*cf.* Tomka 1992). Погребни ритуал се сагледава кроз исту теоријску призму и у истом редоследу као обичаји на гробљу Валалики–Вшехсветих, уз важан изузетак – на некрополи Обид нема гробова спаљених покојника. У десет рака нису нађене кости преминулих: судећи према њиховим малим димензијама, реч је о гробовима деце, чији се скелети нису сачували. Истражено је само седам коњаничких гробова, колико и двоструких сахрана. Од укупно 201 покопане особе било је 55 мушкараца, 66 жена и 68 деце. Укупно 34% сахрањене деце – тек нешто мање него на некрополи у селу Валалики – и овде сведочи о високом морталитету најмлађих. Само 34 гроба су претрпела оштећења, при чему је у девет случајева начињена минимална штета, за коју су можда заслужни глодари. Неки укопи су оштећени током ископавања.

Раке су се уочавале на релативној дубини до 0,5 m и углавном су биле правоугаоне (аутор упозорава на општу субјективност приликом археолошких описа [не само] гробова, за шта као најбољи пример наводи управо описивање *правоугаоне*, односно *трапезоидне* форме, што зависи од мањих или већих одступања од основног облика). Нису уочене контуре шест дечјих гробова, док је 19 рака било трапезоидног облика. У неким случајевима таква форма упућује на оштећење горњих кота раке, како се тумачи и десет овалних укопа. Премда су на некрополи Обид гробови укопавани у лес, па су њихове ивице углавном вертикалне, неретко је бележено заобљавање углова или искошавање страна раке. Није реч о значајнијим одликама гробова, већ пре о недовољној вештини или пажњи приликом укопавања раке: у светлу раније изложених коментара, можемо се запитати да ли и такви детаљи нешто говоре о друштвеном статусу покојника? Велика пажња се придаје гробним конструкцијама, укључујући и базу података на компакт-диску. Гробови 82 и 160 имали су по пар стубова укопаних по средини дужих страница, док су по четири стуба при угловима, односно по шест на дужим страницама, била постављена у по 35 рака. У гробу 70 је забележена јединствена комбинација два вида укопавања, са укупно десет стубова (T. LI). Стубови су били повезани положеним облицама које су носиле поклопац од дасака – на тај начин је тело покојника чувано од додира са земљом. Поклопац је често увлачен у водоравне жлебове усечене у странице рака, што представља особеност гробља у Обиду. Извођење такве конструкције „захтевало је вештину и, са данашње тачке гледишта, [представљало] непотребну компликацију.” У пет случајева установљено је облагање раке дрветом; 20 гробова било је укопано „на банак”. У неколико гробова, укључујући гроб 28, испод покојника је установљена неправилна црна мрља, вероватно од органског материјала. У пет укопа су забележени омањи негативи носача тзв. мртвачких лежајева. Сахрана у таквој конструкцији је документована и у раци гроба 192, са шест стубова. Упркос уложеном труду, у 21 гробу није могао да се установи тип конструкције – неки од њих били су оштећени. Насупрот томе, у неколико гробова документовано је комбиновање различитих конструкција. Важна је претпоставка о функцији удубљења на дну рака, више главе и ниже стопала, која се врло често бележе широм Каганата: разматра се могућност да су она прављена не би ли се олакшало смештање ковчега. Та удубљења се ретко налазе у гробовима „на банак” и обложеним ракама (стр. 57–60).

Да би текстуални описи били јаснији, Забојник прилаже и илустрације – колико ми је познато, најјасније и најлепше слике авародопских гробова које су икада објављене (obr. 5–13). На основу квалитетних црно-белих фотографија из документације и ауторових инструкција (нап. 19), илустрације у боји израдио је А. Арпаш (A. Arpáš). Може се закључити да су прилози, у виду пресека тродимензионалних модела, направљени на рачунару. Представљено је неколико типова гробних конструкција. Компјутерски модели се приказују уз фотографије, најпре у истој – приближно ортогоналној – пројекцији и величини, а потом из других углова. Гроб 103, у којем је била сахрањена особа женског пола, имао је раку „на банак”. У вертикалном пресеку приказани су покојница како лежи на даскама и поклопац од дасака изнад ње, а на наредној табли фазе сахране: укопана рака, постављање пода од дасака, полагање покојнице и покривање поклопцем. Потом је на сличан начин представљен дечји гроб 119, с конструкцијом од усправних стубова и положених облица које носе поклопац од дасака. Нарочито су атрактивни прикази коњаничког гроба 151, односно сахране у сандуку на постољу (мртвачком лежају) из гроба 188. Покојници су представљени реалистично и одевени, па је, према теренској документацији, приказан и појас мушкарца из гроба 188.

Прецизно је документована оријентација 165 покојника, док је у 29 случајева, због пропадљивости дечјих скелета и разних оштећења, забележена само оријентација раке. Гробови су у највећем броју оријентисани у смеру северозапад–југоисток, често са отклоном према северу, док је само гроб 113 – скромног али уобичајеног инвентара – имао оријентацију север–југ (tab. 1–2, diagram 1–2). Покојници су махом сахрањивани појединачно, на леђима, с рукама опруженим уз тело (152 гроба), што се претпоставља за још 29 оштећених гробова. Бележена су извесна одступања у положају горњих и доњих екстремитета, што је најизраженије у гробу 50, у ком је сахрањен мушкарац узраста maturus I са јако савијеним ногама (T. XLI/50). Одступања се углавном тумаче као последица малих димензија раке или гробних конструкција, недовољно пажљивог полагања тела, сахране у покрову, потребе за смештајем прилога или познијих оштећења (*cf.* Ďuricová 2007). У гробу 63 била је сахрањена жена стара око 20 година, на десном боку и у полузгрченом положају, без прилога (T. XLVII/63). Након занимљивог али можда излишног екскурса о вишеструким авародопским сахранама у Словачкој и Аустрији, Забојник представља седам двојних гробова из Обида. Само је у гробу 11 било сахрањено двоје деце. У осталим случајевима покопане су одрасле жене с децом узраста infans I, уз изузетак гроба 120, у којем је био сахрањен старији мушкарац с већим дететом. Док су раке двојних гробова уобичајено оријентисане, положај деце у односу на одрасле варира. Те целине одликују скромни инвентари. Свих седам коњаничких гробова било је накнадно оштећено. Коњаници су углавном полагани у југозападни део раке, а коњи уз њихову леву страну. У гробу 129, међутим, покојник је био у

североисточном делу раке а коњ са десне стране и супротно оријентисан. Занимљиво је да су, осим лошије опремљеног гроба 34, те целине распоређене у средишњем делу некрополе, на малим растојањима. На основу прилога датују се у фазе SS I и SS II, у прву половину 8. века, док је гроб 34 приписан фази SS III. С коњима су сахрањивани мушкарци јувенилне до зреле доби, док су пастуви старости од пет до шест година, сем млађе животиње у гробу јувенилне особе 151. На кичменом делу скелета једне јединке утврђени су трагови смртне ране. За разлику од некрополе у селу Валалики, у коњаничким гробовима у Обиду нема дрвених ведрица. Нађене су у три „обична" гроба, што не поткрепљује претходне претпоставке о њиховој намени (стр. 70–74, 99–100).

Будући да нису сачувани сви скелети са првих ископавања, антрополошка анализа није била потпуна. Уочавају се занимљиве разлике у расподели по старосним категоријама. Мушкарци су најчешће сахрањивани у зрелој и старој доби (maturus, senilis), а жене, осим старих, у млађем узрасту adultus I, што се тумачи високом порођајном и породиљском смртношћу (tab. 3–4, diagram 3–4). Наглашен је висок проценат дечјих сахрана, који је изворно могао да буде још виши. Гробове су могли да оштете савременици, због пљачке или из ритуалних разлога, или је до тога долазило (знатно) касније – таквих целина на некрополи Обид има девет. Од 35 (34?) таквих укопа, 16 је знатније оштећено, углавном у зони горњег дела тела покојника. Аутору није сасвим јасно да ли лобање у гробовима 43 и 99 недостају због секундарних интервенција, јер посткранијални скелети нису дирани, али се није упустио у детаљније разматрање тог важног питања. Одрубљивање главе се веома ретко документује на авародопским гробљима: посебан рад посвећен је случајевима са некрополе Медлинг у Аустрији, где су одсечене главе биле постављане у анатомском положају (Wiltschke-Schrotta, Stadler 2005). Пре би се могло помислити да је одрубљивање вршено постхумно, за потребе неког нама непознатог ритуала, али би за изрицање дефинитивног суда ваљало сачекати детаљну антрополошку анализу. Код нас се „крађи лобања" посветио Јован Ковачевић (1977, 204–205), док је у новије време Бранислава Микић Антонић опширно коментарисала такве случајеве из Бечеја, уз навођење других примера са јужног руба Каганата (Микић Антонић 2012, 79–80, сл. 91). Да је реч о постхумној ритуалној радњи, говорило би то што су оштећене и богате сахране које нису биле похаране – гроб 43 био је знатно богатији од гроба 99. Уз то, лобања из испуне пљачкашког рова који је оштетио гроб 72 не припада растуреном скелету на дну раке, док коњанику из гроба 129 недостају лобања и део горњег скелета (стр. 74–77, obr. 15–17, T. XXXVI, XXXVII/43, LXVI/99, LXXXV/129).

Кад је реч о стратиграфским односима, осим целина које су пресечене модерним каналима, два гроба су била укопана у (нешто) старију кућу 22. Гробови 76 и 77 секу се у малој мери, али не садрже налазе који би могли да се ближе датују. У овој књизи Забојник се не упушта у опширнију расправу о гробним прилозима и даровима, већ примећује забуну и различита одређења која круже у археолошкој литератури, па предмете одређује збирно и неутрално, као гробне „налазе и прологе". Писац истиче мишљење, донекле поједностављено, да остаци ношње из гробова сведоче о друштвеном статусу сахрањених особа. Тешко је поуздано разлучити да ли, и у којој мери, опрема неког покојника заиста представља сет предмета које је особа користила током живота, или пак у целини или делом одражава жељу ожалошћених да га представе у одређеном светлу и статусу током процеса сахране – у другом случају, гробни ансамбл би заправо представљао израз друштвених стремљења заједнице, а не самог појединца (*cf.* Schülke 1999, 95). Уз поједине речите примере, писац кратко коментарише прилоге у функцији дарова, на шта сам се већ осврнуо. Прилога није било у 47 (48?) гробова (24,2%), од којих су чак у 32 била сахрањена деца; из три целине су прикупљене само животињске кости.

Након општих напомена о авародопским појасним украсима, наглашава се да су на некрополи Обид они нађени у (највише) 13 гробова, углавном као појединачни окови а не делови комплетних сетова. Међу тим целинама су и четири оштећене коњаничке (гр. 24, 34, 39 и 129). Боље сачуване гарнитуре потичу из гробова 39 и 43, комплетне из гробова 8 и 192, а најбогатија из гроба 188. Преглед отпочиње фрагментованим предметом из гроба 15 (T. XI/15:2) који је аутор приписао свом типу 306, сад уз напомену да би могла бити реч о окову торбице – тим пре што су у непосредној близини нађени и кременови и једна „омега" фибула. Заиста, такви налази су касније сврстани у тип 2d окова торбица (Tobias 2011, 281, Abb. 6D). Иако су серијацијски датовани у време прелаза између фаза SS II и SS III, сада их Забојник смешта у почетак 8. века. Извесна неусаглашеност са серијацијским датовањем односи се и на тип 186, тј. на четвороугаоне лимене окове из оштећеног гроба 24. Ти предмети се у тексту датују до краја средњоаварске фазе MS II и почетка касноаварске фазе SS I, мада су у серијацијском дијаграму и на ситуационом плану у самој монографији смештени у ранију фазу MS I (650–675: pril. 3/g; Zábojník 1991, Abb. 1). Калотасти лимени окови орме такође говоре у прилог ранијем датовању, као и мањи правоугаони оков са псеудоресама (T. XVII–XVIII): поред бројних налаза са скелета коња, матрице за израду сличних предмета потичу из сетова из Кунсентмартона и Фелнака (*cf.* Garam 2001, Abb. 137–138). Збуњује већа количина уломака керамике са витла (стр. 21, T. XIX, XX/24). Уколико је у гроб 24 доспела приликом сахране, датовање целине би припадало средњоаварском периоду, тј. последњим трима деценијама 7. века; ако се то десило током оштећења раке, сахрана је вероватно била извршена средином тог столећа. У сваком случају, гроб 24 припада првој етапи сахрањивања на некрополи.

Судећи по деловима појаса, гроб 192 је припадао фази SS I – датовање се изводи на основу ретког налаза спојнице главног језичка (серијацијски тип 53), трапезоидне ливене пређице са оковом од лима и алки с лименим оковима (T. CXXXIX). Док се језичци из гроба 50 и споредан језичак из гроба 59 опредељују у фазу SS II, као и језичак и окови с представом грифона из гроба 39, најбоље сачувана гарнитура из тог периода потиче из гроба 8. Издваја се дводелна копча чија је овална алка завршена сучељеним змијским главама (T. VII, VIII). Налази из гроба 43 тежишно се датују око средине 8. века. Иако се поједини типови заступљени у гарнитури из гроба 188 јављају у фази SS II, на основу осталих налаза целина је исправно датована у фазу SS III. Споредни

језичак из гроба 34 такође припада тој фази, уз појасне налазе из гроба 150. Истичу се копча и окови из гроба 129. По облику припадају северноиталијанском (или италијанском: Bálint 2019, 50, 272, Fig. 78/22), односно *Bieringen* типу. Међутим, у украсу у виду концентричних кружница, који је заступљен на још неколико предмета са касноаварских гробаља у Словачкој, Забојник види ознаку домаће производње по иностраном узору (*cf.* Zábojník 2000). Ваља нагласити да мотив нема толико везе са (касно)аварским миљеом, колико са германским. По Нађи Профантовој, тај налаз је значајан јер пружа „контролу хронологије" и указује на надрегионалне контакте (Profantová 2020, 307). Сви представљени предмети су бронзани, само је оков у виду елисе пропелера из гроба 59 од месинга (стр. 80–83).

Налази оружја су слабо заступљени. У целости изостају оплате лукова, стрелице и копља. Секире потичу из гробова 135 и 182. Судећи по димензијама, биле су бојне: аутор их је определио у типове 8c и 6b референтне типологије (Szücsi 2014). С друге стране, од девет ножева који се воде као бојни, само налази из гробова 12, 134 и 167 задовољавају раније предочене метричке параметре. То се још у већој мери односи на посебно издвојене једносекле налазе из гробова 8 и 43, за које се нуди и ближе одређење, да је реч о саксовима (18, Т. VIII/3). Забојник разматра и категорију палаша, у коју их оправдано не сврстава због величине: сакс, међутим, има другачију форму. Налази опредељени као бојни ножеви махом потичу из скромних сахрана и не јављају се у комбинацији са оружјем, што би такође могло да говори против понуђене интерпретације. Жвалама су приписана само два фрагментована налаза (онај из гроба 135 могао је бити разводник оглава), па се помишља да су остали коњи у губицама имали жвале од органских материјала. Делује вероватније да је изостанак тих налаза узрокован оштећењима гробова и корозијом; исто би се односило и на узенгије, забележене у само два коњаничка гроба. Осим налаза из гроба 24, из гроба 129 потиче пар стремена са омега петљом, док су у три целине нађене масивне копче орме. Скромни украси орме, углавном од бронзаног лима, нађени су у пет гробова. Сем описаних комада из гроба 24, из гроба 135 потичу декоративније отиснуте розете. Најинтересантнији су недоступни налази из гроба 23 (Т. XVI/23), чији је положај прецизно документован. Осим сродних средњоаварских украса орме са гробља Замарди (Bárdos, Garam 2009, 72, T. 60: 475/1–82), Забојник наводи да су одговарајући правоугаони украси потврђени као женски накит главе у Медлингу и као окови појаса детета на гробљу Желовце (стр. 83–86). Украшавање коња и људи истом оковима упућује на велики значај тих животиња у изворно номадском друштву (Бугарски 2009а, 94).

Насупрот великој већини накита која се налази у функционалним распореду, споменуто је да се такви *прилози* затичу и у гробовима мушкараца: Забојник те примере тумачи као поклоне жена. На некрополи Обид, наушнице су нађене у 43 гроба – у 29 у пару. Скоро све парове су чинили комади истог типа. Највећи број примерака је од бронзе (24), месинга (29) и комбинације тих легура (6), што се тумачи скромнијим имовним стањем сахрањиване популације (*cf.* Profantová 2020, 307). Каричице из гроба 5 су од сребра, а нарочито се истиче, „не само на некрополи Обид", пар златних наушница из гроба 21 (obr. 19). Аутор је приликом ближег одређивања наушница и у овој књизи користио старе радове Злате Чилинске (нап. 57). Једноставне каричице широког датовања потичу из 18 гробова. Наредну групу чине округле каричице, с коленцем или без њега, које су носиле тамне стаклене перле (тип 1). Ти примерци одговарају споменутом типу IIa са оближње некрополе Нове Замки (650–725), док их Забојник у овом случају датује око пола столећа позније, као и наушнице с металним носачем перле из гробова 3, 44 и 122 (Т. IV/3:1, XXXIII/44:1, LXXXI/122:1). Ти комади (тип 2), чини се с помичним привеском, ипак одговарају налазима из Тисафиреда који се датују од 670. до око 730. године (Garam 1995, 274–276, Abb. 148/25, 254). Сличне наушнице потичу из два гроба у Чонопљи (Радојевић 2004, 45, Т. I/6–7, V/8). Врло су занимљиве, и доста ређе, пуноливене имитације наушница с округлим каричицама и перлама из гробова 40 (Т. XXXI/40:1) и 140. Примерци са овалном алком и призматичним привесцима, попут налаза из гроба 168 (Т. CXVII/168:1–2), доста су познији – у Тисафиреду се јављају у другој половини 8. века и касније (Garam 1995, 280, Abb. 148/38, 254). У нашем случају, такво датовање је потврђено налазом ниске црних перли у облику лубенице.

Пуноливене наушнице с једноставним привесцима од псеудогранула могу бити златне (гр. 125) или позлаћене (гр. 155: Т. CVIII/155:1). Алке из гроба 128 красе по две размакнуте куглице (Т. LXXXIII/128:1) – сматрам да је то старији облик. Псеудогранулирани привесци су често у форми обрнуте пирамиде. Такве наушнице припадају типу IV са гробља Нове Замки, који се датује од 675. до 825. године (Čilinská 1966, Typ. IV, Abb. 11). Уже одређење би падало у крај 8. и почетак 9. века (Garam 1995, 280), о чему би могла да сведочи и друга наушница из гроба 146, чији је крај обликован у виду цилиндричног навоја (Т. C/146:1/1–2). Било је речи о могућностима финијег датовања типа V са некрополе Нове Замки, што би важило и за *S* каричицу из гроба 163. У дечјем гробу 133 нађен је шупаљ купасти привезак од сребра, украшен филиграном, из најраније фазе сахрањивања. Како у хронолошком тако и у технолошком погледу, могао би да се доведе у везу са златним наушницама из гроба 21 (Т. XIV/21:1). Аутор даје поуздане средњоаварске паралеле из Кецела (Garam 1993, 80, T. 47/12–13). Примећено је да су примерци из Обида доста истрошени, док остали скромни налази из тог гроба одрасле особе женског пола не пружају могућност ужег датовања. Ако се има све у виду, покоп је вероватно извршен почетком 8. века: Забојник сматра да су златне наушнице изворно припадале старијој рођаки преминуле. Наушнице са некрополе аутор је класификовао у десет типова (obr. 20). Чини се да је типологија могла да буде ужа, тако што би се – уз издвајање варијанти – спојили типови 4 и 5 (луксузне лимене наушнице), 6 и 8 (пуноливене с кугластим привесцима у различитом распореду), а можда и 9 и 10 (каричице с привесцима обликованим савијањем једног краја). Због сразмерно малог броја налаза, ипак, питање је да ли је уопште било потребе за израдом типологије. Писац скоро све типове датује у фазе SS I и SS II, сем позног типа 3 – овалних наушница с призматичним привеском; као што је наглашено, наушнице типова 6 и 8, као и каричице типова 9 и 10, вероватно припадају познијем периоду.

Наруквице чине део пет инвентара. Скоро све су нађене у паровима, у гробовима млађих жена. Сви примерци су

отворених крајева, ливени у бронзи или месингу. Док је налаз из гроба 21 стањеног тела, из гроба 40 потиче пар типичних, масивних наруквица проширених крајева, украшених пунцирањем (Т. XXXI/40:2). Остали комади су по том својству између описаних (гр. 37, 70, 103). Такве касноаварске наруквице не омогућавају детаљнија хронолошка разматрања, нити дискусију о статусној вредности. Перле су забележене у 25 гробова, од појединачних налаза до ниски од више десетина украса. Ниске су састављане од истих или пак различитих перли, од којих је само једна од бронзаног лима. Налажене су у гробовима жена и јувенилних особа, вероватно истог пола, али у дечјим нису. Ситне црне и жуте перле у облику зрна проса документоване су у старијим укопима у средишњем делу гробља, а мањи број таквих комада и у позним нискама (Т. CXXXVIII/193:1). Перле у облику семенки лубенице, каткад навлачене на металне нити, најчешће су црне боје, али има и светлих: оне се налазе у централном делу некрополе, а ситније црне у позним целинама у јужном делу. Поређене су с типологијом налаза са некрополе Прша II (Staššíková-Štukovská 2004). Дискусија о њиховом просторном распореду пружа потврду ранијих закључака да су средњоаварске перле у облику зрна проса коришћене и почетком касноаварског периода (њихову појаву у позним нискама могли бисмо да тумачимо коришћењем доступних старијих украса), да се светлије и нешто крупније перле у облику семенки лубенице такође појављују у прелазном периоду аварске превласти, док ситни примерци црне боје представљају најкарактеристичније касноаварске перле (Pásztor 2008: 318–319, Tab. 2). Нарочито је занимљива ниска из гроба 128, ношена на пропалој бронзаној жици која је висила о описаним наушницама (Т. LXXXIII/128:1–2). Била је сачињена од зрна у облику проса, једноставних сферичних и полиедарских комада и украшених биконичних перли: према типохронологији Адријен Пастор, одреда је реч о раноаварским и средњоаварским украсима. Забојник наводи неколико примера овог специфичног начина ношења ниски, а једна од њих потиче и из касноаварског гроба са некрополе Нуштар (*cf.* Rapan Papeša 2020, 20). Спомиње се и „мање-више необична" полигонална перла из гроба 133 (Т. LXXXVIII/133:2): одавно је објављена ниска таквих кубооктоедарских перли са некрополе Богојево IV (Pogány 1908, 409/XXVII, 410), које су поуздано опредељене у средњи период аварске превласти, односно прелаз из 7. у 8. век (Garam 1995, 290, Abb. 166/3–4).

Једноставно прстење од бронзе и месинга потиче из 11 (13?) гробова. Налажени су по један или два прстена, а у гробу 40 чак три; једино је одрасла особа из гроба 155 била мушког пола. Већином је реч о примерцима кружног или тракастог пресека, отворених крајева, који не представљају статусне показатеље. Пафта из гроба 138, одрасле жене, начињена је од две кружне плочице позлаћеног бронзаног лима, украшене венцима отиснутих псеудогранула око разнобојних уметака, које су на полеђини имале основу од неког органског материјала (obr. 20). Аутор је најближу паралелу нашао у гробу 7. века из Халимбе, али гроб 138 – на основу особина сахране а не налаза – датује у фазу SS II, уз претпоставку да је пафта познија имитација златних средњоаварских комада. У прегледу пафти из аrandoдопских гробова у Словачкој писац наводи и сведену типологију према којој би налаз из гроба 138 припадао типу II1a, углавном из последње трећине 7. и с почетка 8. века (Kürti, Wicker 1991, 20–21, Abb. 2/5–6), па би ипак могло да се предложи спуштање датовања сахране из Обида (стр. 87–93).

Преглед „осталих предмета" отпочиње налазом од златног лима из гроба 24. Такви предмети се обично тумаче као имитација златника у функцији обола и одређују у средњоаварски период. Забојник примећује да се у истим целинама често налазе и гајке за перчин: карактеристични украси из гроба 24 су израђени у виду цилиндара од сребрног лима и ојачани бронзаним прстеновима, с делимично сачуваним улошцима од дрвета јавора. Одговарајуће гајке се у литератури приписују виђенијим припадницима ратничког сталежа (obr. 21, Т. XVII/24:2, 3; *cf.* Andrási 1997). Из гроба 15 потиче римска омега фибула. Сличне старине су затупљене широм Каганата: у расправи се допуњује списак Бендегуза Тобијаса, који броји око 40 комада (Tobias 2007, 336–337). Будући да ни у Обиду није сачувана игла фибуле, писац сматра да су оне у секундарној употреби ношене као појасне алке, не одричући им ни могућу „магијску" улогу, о чему је било речи. У гробу 169 нађен је јединствени предмет, налик на наковањ, тзв. бабицу за клепање косе. Прецизнију идентификацију масивног гвозденог налаза отежавају три придружене карике ланца (Т. CXIX/2:1; CXX/2:2). Помишља се да је бабица могла бити део златарског алата, што је због ланца мање вероватно. Поред познијих паралела, аутор наводи само једну аrandoдопску, из околине Братиславе. Међу гробним налазима су обрађене и две гвоздене клепетуше са уништеног простора некрополе (Т. XXVI: 1, 4). Питање је да ли је уопште реч о прилозима, јер се клепетуше врло ретко јављају у аrandoдопским гробовима – код нас у Мокрину (Ранисављев 2007, 44–45, сл. 31, 32). Занимљив је и украшен конични предмет од исечене, наспрамно перфориране кости, који је вероватно био зачепљен са обе стране и служио као кутијица. Такви налази нису ретки и махом потичу из дечјих гробова. Забојник као изузетак наводи још један налаз из Мокрина, богато декорисану тубу која је вероватно потицала из ратничког гроба (Ранисављев 2007, 14, 55, сл. 73–75, Т. XXXVIII), уз опаску да су ти предмети често налажени у комбинацији с прапорцима и смелу претпоставку да су имали функцију сликовнице. Камење у гробовима не представља прилоге, нарочито оно из испуне раке. Све и да је намерно бацано с горелим животињским костима, била би реч о остацима ватришта и даће. Исто би се односило и на уломке керамике из рака 124, 134, 150 и 164. У неколико испуна било је и лепа (стр. 93–97, 101, нап. 111), што такође није гробни прилог.

Потом се обрађују „предмети свакодневне употребе", где се опет срећу неке категорије налаза које су могле бити другачије сврстане (стр. 97–99). Најпре се спомињу ножеви из 38 укопа, чести као прибор мушкараца, уз налазе из три дечја гроба. У три или четири целине било је по два ножа. Ако бисмо им придружили и шест нешто већих комада, који су обрађени као бојни, било их је још више. Најчешћи налази су једноставне гвоздене копче, које потичу из 65 гробова особа оба пола и, ређе, деце. Углавном су налажене појединачно, у 15 гробова по две, док из коњаничких гробова (нпр. гр. 129) потичу и сродне али масивније копче орме. Нађено је и шест бронзаних копчи, од којих нису све биле појасне: у гробу 150 забележена су два таква налаза (Т. CIII/150). За разлику од некрополе Валалики–Вшехсветих,

пршљенци у Обиду представљају сасвим уобичајене прилоге. Нађени су у 25 гробова, махом особа женског пола, уз две дечје сахране где њихова појава може да се узме као показатељ полне припадности. Преовлађују биконични пршљенци (21), од којих је половина украшена водоравним жлебовима или урезаним линијама. Готово да нема најкарактеристичнијих (и најпознијих) украса конуса, у виду цикцак линија. Гвоздени пробојци потичу из неколико гробова: јасно су опредељена четири налаза (гр. 18, 150, 172 и 188). Кресива и кременови су документовани у осам, односно седам гробова, најчешће заједно. Одреда су у питању сахране мушкараца, уз могући изузетак гроба 160. Препознатљиви комади су у уобичајеном облику лире. За разлику од претходно представљеног налазишта, на некрополи Обид је заступљена још једна група налаза – коштане игленице из шест гробова особа женског пола. У гробу 181 нађене су две игленице правоугаоног пресека (Т. CXXVII/181: 2–3), док су остали примерци уобичајене, цилиндричне форме и украшени на токарском колу. Саме по себи, игленице не пружају могућност ужег датовања, па су гробови 141, 148 и 149 временски одређени на основу наушница, уз закључак да тих налаза нема у најстаријим целинама. Једини срп потиче из гроба 120 (Т. LXXVIII, LXXIX/120:5), датованог у фазу SS II. Нађен је уз лобању одраслог мушкарца који је био сахрањен са дететом. У коњаничком гробу 23, који је приписан истом времену, документована је гвоздена пинцета. Судећи према оковима орме и позицији у средишњем делу гробља, не би требало искључити могућност да је реч о старијој сахрани, из прелазног периода. У овом случају писац није тражио аналогије: макар на југу аварског простора, пинцете се не јављају у касноаварско доба (Бугарски 2009a, 110). У позноаварском гробу 150 нађен је брус (?). Реч је о перфорираном налазу од обрађеног камена, правоугаоног пресека (Т. CIII/150:6), који би заправо могао бити лидијски, тј. пробни камен за испитивање племенитих метала (*touchstone*), како га је определила и Нађа Профантова (Profantová 2020, 306). Такав налаз би свакако дао на значају овој позној сахрани (*cf.* Ježek, Zavřel 2013).

Након краћег задржавања на ведрицама, представљени су керамички налази из 34 гроба (17,5%), на основу којих се и гробље у Обиду сврстава у малобројна налазишта са севера Каганата са слабом заступљеношћу грнчарије. Посуде су полагане у гробове особа оба пола и свих узраста – углавном појединачно, а у три случаја по две: у гробовима 2 и 181 биле су сахрањене припаднице женског пола, а у гробу 11 два детета. Једна посуда из прве целине припада групи тзв. жуте керамике (Т. III/2:2–3), на основу чега је гроб шире датован у 8. век, док се према особинама сахране предлаже уже одређење, у фазу SS II. Преостала два гроба се на основу начина сахране одређују у најмлађи хоризонт некрополе. Од облика се издвајају конична посуда из гроба 97 (Т. LXV/97:4), која има позне паралеле, и већи лонац суженог врата из гроба 104 (Т. LXXI/104:2) који по аутору можда представља имитацију тзв. сивих посуда. Највише по вертикално профилисаном и задебљаном врату посуда заправо подсећа на представника Видине „жућкастоцрвене" (*gelblichrote*) групе, претежно из средњоаварског периода (*cf.* Vida 1999, Typ IE/b2, 83–88), мада при оваквим поређењима треба задржати доста опреза. Најзанимљивији је крчаг уског отвора из гроба 70 (Т. LII/70:6). Тврди се да је реч о „негде нађеној и секундарно употребљеној" римској посуди, мада не делује вероватно да је тако осетљив суд могао да остане неокрњен током векова. Уз то, познато је да су се у Каганат увозиле посуде из Византије (пре свега као амбалажа) и да је локално произвођена керамика касноантичког типа (Vida 1999, Typ IF, 88–106; Bálint 2019, 196–197). Остале посуде су уобичајених облика, претежно са витла. Неке од њих имају ознаке на дну, углавном у облику уписаног крста, што није реткост. Укупно 11 посуда било је обликовано слободном руком, од којих седам није украшено. На сл. 22 даје се табеларни приказ декорација, које су опет распоређене у шест група. Украси су извлачени зашиљеним инструментом или чешљем, у виду засебних водоравних линија (A) и снопова (C), валовница (D) и њихових комбинација (најбројнија група E). Групу F чине урезани и пунцирани цикцак украси, самостално или у комбинацији са сноповима и валовницама, али ни технолошке ни декоративне групе не пружају уже хронолошке распоне. Уломци грнчарије су знатно чешће прикупљани из гробне земље, током пражњења 109 рака (56,2%). Тако висок, „неупоредив" проценат можда представља последицу брижљивијег ископавања. Осим у два гроба укопана у кућу 22, у чијим су испунама нађени нешто старији фрагменти руком рађене керамике, у осталим ракама се срећу уломци касноаварске грнчарије са витла (tab. 6). У двадесетак случајева било је по 10–20 ситних делова различитих посуда, међу њима и вршника (*cf.* Vida 2016). Сматра се да су оне могле да замењују целе посуде које се обично полажу уз покојнике (стр. 100–101, 104).

Кратки одељци о животињским костима, које ће бити тема посебне студије (нап. 112), садрже само најопштије статистичке податке о заступљености у гробовима, како је бележено током ископавања. Као јасно препознати остаци попудбине, кости потичу из 74 гроба, чему треба додати и оне констатоване у гробној земљи, приликом пражњења најмање 75 рака. Те кости не потичу из објеката оштећених приликом укопавања гробова, већ представљају археолошки траг ритуалне праксе. Неретко су биле нагореле, па се с правом помишља на даће [одељак је грешком два пута одштампан: стр. 103, 105]. Љуске јаја су нађене у десет гробова – по пет сахрана деце и одраслих. На некрополи Сегед–Фехерто А јаја су такође полагана уз покојнике оба пола, свих узраста и различитог друштвеног статуса, при чему није уочена правилност распореда у оквиру раке (Madaras 1995, 58). У Обиду је прилагано по једно или по неколико јаја: изузетак представља гроб 193, у којем је горњи део скелета детета био дословце окружен јајима (Т. CXXXVIII/193). Интересантна расправа прати „необичне" налазе кућица пужева, забележене у 18 рака. Пошто оне нису најпрецизније документоване, данас није јасно да ли су пужеви били полагани као прилози или потичу из гробне земље: чини се да су бар у неким случајевима приспевали у раку приликом засипања. Ипак, кућица пужа је у једном гробу нађена на грудној кости детета, док су у другом они констатовани непосредно изнад скелета, на дубини од око 1,20 m, до које, како је процењено, нису могли да допру самостално. Из јужних аварских крајева знамо за пример са некрополе Старчево–Ливаде, где је у једном гробу уочена концентрација пужева у карличном пределу скелета (Гачић 1985, 179).

Као и у претходној књизи, поглавље о хронологији отпочиње освртом на тростепену поделу аварске превласти, уз позиве на референтна дела (осим Garam 1995), укључујући ређе коришћену хронологију Петера Штадлера у којој се уводе и методи датовања из природних наука (Stadler 2005). На тлу Словачке има мало раноаварских целина (истиче се некропола Комарно VI), па следи сажета расправа о две фазе прелазног периода (650–700), формулисане у Забојниковој серијацији. Тврди се да је таква подела „у складу с виђењима већине истраживача Аварског каганата”. По мом мишљењу, почетак средњоаварског периода би требало одредити око 670/680 године, од када се прате значајније промене у материјалној култури, док би гробови *Тоūиūуста–Иīар* групе представљали позну манифестацију раноаварског периода, условљену потребом за реафирмацијом моћи аварске врхушке после краха код Цариграда 626. године. Управо због раноаварских традиција тог хоризонта, Фалко Даим почетак средњоаварског периода одређује у 650/670. годину (Daim 2003, 487–497). Велика већина авародопског наслеђа Словачке припада касноаварском времену, подељеном у три (Daim 1987) или четири одсечка (Zábojník 1991). Те хронологије су изведене на основу проучавања појасних гарнитура. Пошто су такви налази слабије заступљени, истиче се да је тешко одредити поједине фазе коришћења гробља Обид, при чему „можда само” инвентар гроба 24 припада прелазном периоду, док се остале сахране датују у прве три фазе касноаварске скале. Наглашава се да скелетни остаци из тог гроба нису анализирани – уколико је била реч о старијој особи, која није била одевена по савременој моди, налази не би нужно сведочили о ранијем укопавању. Иако није потврђено сахрањивање из фазе SS IV, наводи се могућност да су такве, најпозније сахране вршене у неиспитаном јужном делу гробља.

Затим се, на трагу споменутог Штадлеровог остварења, расправља о могућностима успостављања апсолутне хронологије. У ретким случајевима располаже се провереним историјским подацима, за шта одличан пример – мада не једнозначан – пружа управо датум доласка Авара у Карпатску котлину (567/568: Koncz 2015). Додао бих да тај датум не представља упориште само за успостављање археолошке хронологије, већ и за расправу о етничкој позадини (рано) аварске материјалне културе. Традиционално се за крај аварског идентитета узима пад Каганата у сукобима са Франачком почетком 9. века, мада се мора рачунати са продуженим присуством популације, а у траговима и њене материјалне културе, јер су се локалне аварске заједнице асимиловале различитим темпом и на различите начине (*e.g.* Daim 2003, 514). „Релативно прихватљив критеријум” представљају и налази новца: Забојникова ограда је оправдана јер се у аварским гробовима налазе и старија ковања (*cf.* Бугарски 2021, 145, нап. 12). Слично би важило и за (изворно) добро датоване импорте, с тим што је управо археологија Авара, захваљујући огромном узорку гробних налаза, изнедрила ваљане датуме многих предмета византијске израде или порекла (*e.g.* Garam 2001). Саме по себи, C^{14} анализе не пружају довољно уске датуме за период раног средњег века, што се може превазићи дендрохронолошком или пак серијацијском калибрацијом. С обзиром на инвентар налаза и чињеницу да је некропола истраживана у прошлом веку, Забојник се од свега наведеног послужио серијацијским датовањем појасних налаза (SS I: гр. 129, 192; SS II: гр. 8, 39, 43, 50; SS III: 150, 188), па је гробље угрубо датовао у прве три четвртине 8. века (стр. 106–108; упор. pril. 3/g). Нађа Профантова је у основним цртама сагласна са таквом хронологијом, с тим што фази SS I приписује и гробове 7, 9, 16, 58, 88, 107, 126 и 131 (иако у тим гробовима нема налаза, датује их „са сигурношћу”: Profantová 2020, 306). Као што проистиче из претходног текста приказа, а без жеље да се залази у детаљне анализе, има још целина које могу добити прецизније датовање. Чини се да су средњоаварском периоду припадали гробови 3, 23, 24, 44, 122, 128, 129, 133 и 138. Уже временско одређење гробова 15 и 43 лежало би у средини 8. века, док би фази SS III припадао и гроб 34. Гроб 168 би могао да се одреди шире, у другу половину 8. века, а гроб 146 можда у крај 8. и почетак 9. столећа.

У закључку књиге се понављају оцене, по мом суду не сасвим тачне, о слабим могућностима датовања аварских целина на основу накита, па је хоризонтална стратиграфија гробља рашчитана само на описан начин (obr. 25). Према аутору, сахрањивање је отпочело у средишњем делу истраженог простора (гробови 24, односно 129 и 192), где се уочава појас од три реда најстаријих гробова. У том делу некрополе се налазе и сви гробови који би на основу овде представљених анализа могли да се датују (и) у средњоаварски период, осим гроба 138 који је смештен јужније. Око њих су гробови из фазе SS II, као и гроб 15, а јужно су укопи из одсечка SS III (pril. 3/i, j). Гроб 146, према овде изложеним разматрањима међу најпознијима, такође је на јужној периферији налазишта. Сходно томе, типови 2, 4, 5 и 6 наушница налажени су у средишњем делу гробља, где доминирају примерци типа 2, које смо приписали средњоаварском периоду, али се наушнице типа 1 углавном налазе северно и јужно од те зоне. Ни комади типа 8 не показују јасну концентрацију. Слично је и са налазима перли: оне ранијег датовања (у облику зрна проса, крупније светле перле у облику семенки лубенице и кубооктоедарске) такође су налажене у централној зони некрополе, а позне црне у јужној (pril. 4, 5). Док предложене допуне не мењају установљени стратиграфски след, можемо да понудимо нешто шире датовање налазишта – у последњу четвртину 7. и прве три четвртине, ако не и током целог 8. века. Померање почетка активности гробља у мало дубљу прошлост није у нескладу с тиме што је на локалитету документовано старије насеље. Особеност некрополе у Обиду свакако представља северна зона гробова без прилога, углавном дечјих, који чине четвртину свих сахрана. Такви гробови се бележе и у средишњем и јужном делу гробља, али у мањем броју (pril. 6). Писац их је на основу стратиграфске анализе датовао у фазу SS II, што не делује обавезујуће за све случајеве, нарочито за гробове из централног дела истражене површине. Код нас је посебна зона дечјих гробова установљена у старијем хоризонту сахрањивања у Бечеју (Микић Антонић 2012, 45). На самом крају основног текста наглашава се да је област ушћа реке Хрон у Дунав, код Штурова, била од стратешке важности у време позне аварске превласти, о чему сведочи велики број истражених гробаља. Захваљујући проспекцији из ваздуха зна се за још две некрополе у непосредном окружењу, где су пробна ископавања такође изнедрила авародопске гробове. Почетак сахрањивања на великој некрополи Штурово I одређен је у прелазни пери-

од, што се овде предлаже и за некрополу Обид која је, по свему судећи, била друга по величини на разматраном простору. На основу археолошке слике, тј. бројних богатих коњаничких сахрана, чини се да је још битнија била област данашњег Комарна. Укључујући и област Братиславе, дакле, знамо за три важне аварске зоне на југозападу савремене Словачке, с густом насеобинском мрежом (*ADAM* 2002, Karte 4), које су контролисале комуникацију са Западом и одбрану Каганата (стр. 109–112). Након библиографије следе сажетак на енглеском језику, у веома ситном слогу, 139 уредних табли, опремљених исто као у претходној монографији (стр. 113–261), и специјалистички прилози.

Анализа стаклених перли, али и камених артефаката, поново је поверена Људмили Илашовој и Јану Штубњи (стр. 262–277). Укупно 202 перле из 25 гробова биле су подвргнуте стандардном гемолошком испитивању, под лупом и микроскопом, и двема спектроскопским анализама. Осим две перле од кристала и карнелијана, остале су од стакла с високим алкалним садржајем, углавном натријума и поташе. Кременови су вађени из силицијумских стена. Анализирано је 13 налаза из седам гробова, такође под лупом и микроскопима. Лидијски камен (?) из гроба 150 је од ситнозрног лискунског шиста (*sericitic shale*): од таквог материјала су два одговарајућа предмета са некрополе Брецлав–Поханско (Ježek, Zavřel 2013, 123). Јана Михајова је и овом приликом испитивала трагове дрвета и текстила на предметима од метала. Анализирани су остаци дрвета на 49 гвоздених и бронзаних предмета из 31 гроба. Дршке ножева и алатки су прављене од дрвета храста и јавора. Једна ведрица је од тисовине а друга од храстовине, што додатно релативизује раније изнете претпоставке. Испитани су остаци тканине на 33 предмета из 18 гробова. Добро су сачувани и шематски илустровани (obr. 8); у једном случају је установљено да је тканина ланена (стр. 278–290). Рендгенску флуоресцентну анализу металних предмета – накита, појасних украса, окова орме и др. – вршили су Јан Тирпак и Ана Тирпакова (Anna Tirpáková). Израђивани су од различитих бронзаних и месинганих легура; бронзане садрже калај и олово. Бронзани накит је у огромном проценту прављен од калајне бронзе (36 од 39 комада), два предмета су златна, три од позлаћеног сребра а четири бакарна. Седам наруквица је направљено од бронзе а две од месинга, као и многе наушнице и четири прстена. Појасни окови су у великој већини од бронзе, као и окови орме, од којих су неки били посребрени. Важан резултат испитивања (стр. 291–334) представља успостављање корелације између вредности легуре, технолошке софистицираности и социјалне стратификације сахрањених, чиме се знатно одмакло од очигледних асоцијација (нпр. *злато* = *богати*).

* * *

На претходним страницама приказане су прве две од пет планираних монографија авародопских гробаља у Словачкој, чијим објављивањем Јозеф Забојник намерава да, макар у овој фази, заокружи своју богату каријеру. Остваривање тако амбициозног програма пуно говори о нашем аутору, чије велико искуство и међународна репутација гарантују квалитет штива. Несумњиво компетентан, аутор се није либио да расправља о неким феноменима којима се у аваролошкој литератури ретко приступа – пре свега мислим на детаљну анализу обичаја сахрањивања, која је у другој књизи пропраћена изванредним илустрацијама. Можда неће бити претерана тврдња да су Јозеф Забојник и његов сарадник отворили ново поглавље у презентацији (аварских) некропола, јер су илустрације у потпуности научно засноване. Њихов значај, тако, превазилази неспорну естетску вредност: пошто се сам Забојник није детаљније осврнуо на ово остварење, слободан сам да приметим да, и поред сталног напретка рачунарске технологије, овако високо постављену лествицу неће бити лако прескочити!

Анализа гробних прилога је вршена у класичном и нешто сведенијем облику, иако су и ту заступљена свежа гледишта. Писац се при датовању целина и, последично, хоризоната сахрањивања ослањао пре свега на уска датовања појасних окова, којима је и сам пресудно допринео (Zábojník 1991). Забојник очигледно нема пуно поверења у ужа датовања других врста предмета, пре свега накита, која се нуде у референтној и њему сасвим сигурно добро познатој литератури. Из тога проистичу извесне недоумице око временског одређења налазишта, које су условиле нешто детаљнији осврт. Такође, било је простора за нешто ширу расправу о хоризонту гробова спаљених покојника, који је потврђен на некрополи Валалики–Вшехсветих. Ваља нагласити да се аутор ослонио на тим стручњака који су вршили сепаратне специјалистичке анализе. У духу правог интердисциплинарног приступа, ти прилози не чине тек додатке или „украсе" књига, већ су у највећој мери коришћени приликом формулисања закључака. Ако се има у виду све наведено и у ишчекивању следећих монографија, могу да изразим наду да ће представљени програм Јозефа Забојника бити подстицајан за нашу публику и да ће се овдашњи стручњаци одважити на сличне напоре.

Иван БУГАРСКИ

БИБЛИОГРАФИЈА:

***ADAM* 2002 –** *Archäologische Denkmäler der Awarenzeit in Mitteleuropa*, Budapest 2002.

Ambros 1993 – C. Ambros, Tierbeigaben in den Gräbern aus der Zeit des awarischen Reiches, *Bioarchäologie und Frühgeschichtsforschung. Berichte des Symposions der Kommission für Frühmittelalterforschung, 13. – 15. November 1990*, Wien 1993, 111–122.

András 1997 – J. Andrási, Avar kori varkocszorítók, *Archaeologiai Értesítö* 123–124/1996–1997, 85–123.

Aspöck 2018 – E. Aspöck, Frühmittelalterliche Graböffnungen: von ungeliebter Störung zur archäologischen Quelle, *Lebenswelten zwischen Archäologie und Geschichte. Festschrift für Falko Daim zu seinem 65. Geburtstag*, Mainz 2018, 3–14.

Bálint 2019 – Cs. Bálint, *The Avars, Byzantium and Italy. A Study in Chorology and Cultural History*, Budapest 2019.

Balogh 2006 – Cs. Balogh, Avar kori kettős és többes temetkezések a Duna–Tisza közén, *Arrabona* 44/1, 2006, 41–86.

Bárdos, Garam 2009 – E. Bárdos, É. Garam, *Das awarenzeitliche Gräberfeld in Zamárdi-Rétiföldek*, Budapest 2009.

Bede 2012 – The status of horses in late Avar-period society in the Carpathian Basin, *The very beginning of Europe? Cultural and Social Dimensions of Early-Medieval Migration and Colonisation (5th–8th century), Archaeology in Contemporary Europe. Conference Brussels – May 17–19 2011*, Brussels 2012, 41–49.

Bereczki *et al.* 2010 – Z. Bereczki, E. Molnár, A. Marcsik, G. Pálfi, Evidence of surgical trephinations in infants from the 7th–9th centuries AD burial site of Kiskundorozsma-Kettôshatár, *Acta Biologica Szegediensis* 54/2, 2010, 93–98.

Béreš 2008 – J. Béreš (Zost.), *Pramene k dejinám osídlenia Slovenska z konca 5. až z 13. storočia. III. zväzok*, Východné Slovensko, Nitra 2008.

Borzová 2006 – Z. Borzová: Kosáky v hroboch z obdobia včasného stredoveku na Slovensku, *Slovenská archeológia* LIV–2, 2006, 209–237.

Bugarski 2008 – I. Bugarski, The Geomorphological Matrix as a Starting Point for Determining the Position of Avar-time Settlements in Pannonia: The Example of the Bačka Region, *Archäologisches Korrespondenzblatt* 38/3, 2008, 437–455.

Бугарски 2009а – И. Бугарски, *Некрополе из доба антике и раног средњег века на локалитету Чик*, Београд 2009.

Бугарски 2009b – И. Бугарски, Ромејске сулице VI века и налази са Градине у Врсеницама и Лишке Ћаве, *Зборник Народног музеја (археологија)* XIX–1/2009, 423–454.

Bugarski 2015 – I. Bugarski, Axe, Battle Axes and Battle Knives from Avar-Time Graves in Vojvodina, *Warriors, weapons, and harness from the 5th–10th centuries in the Carpathian Basin*, Cluj–Napoca 2015, 129–146.

Бугарски 2020 – И. Бугарски, Критички прикази: Csanád Bálint, The Avars, Byzantium and Italy. A Study in Chorology and Cultural History, Varia Archaeologica Hungarica 31, Institute of Archaeology, Research Centre for the Humanities, Hungarian Academy of Sciences, Archaeolingua, Budapest 2019, 372 pp, 82 figs, *Старинар* LXX/2020, 257–278.

Бугарски 2021 – И. Бугарски, Гроб коња из Виминацијума и копља облика трске, *Свет средњовековних утврђења, градова и манастира. Омаж Марку Поповићу*, Београд 2021, 143–155.

Bugarski, Ivanišević 2018 – I. Bugarski, V. Ivanišević, Sixth-Century Foederati from the Upper Moesian Limes: Weapons in a Social Context, *Vivere Militare Est. From Populus to Emperors – Living on the Frontier* I, Belgrade 2018, 291–332.

Bugarski *et al.* 2013 – I. Bugarski, N. Miladinović-Radmilović, I. Popadić, M. Marjanović, Early Mediaeval Burial at Stubline near Obrenovac: Spatial, Anthropological and Archaeological Analyses of the Southernmost Avar Grave, *Acta Archaeologica Carpathica* XLVIII, 2013, 285–305.

Bunardžić 1985 – R. Bunardžić, *Čelarevo, Risultati delle ricerche nelle necropoli dell' alto medioevo,* Novi Sad 1985.

Vida 1999 – T. Vida, *Die awarenzeitliche Keramik I (6. – 7. Jh.)*, Berlin – Budapest 1999.

Vida 2016 – T. Vida, Backglocken, Backdeckel und Backhauben. Archäologische Angaben zur Ernährungskultur Süd- und Mitteleuropas, *Acta Archaeologica Academiae Scientiarum Hungaricae* 67, 2016, 361–422.

Вујовић 1994 – М. Вујовић, Трагом једног податка, *Гласник Друштва конзерватора Србије* 18, 1994, 87–88.

Garam 1993 – É. Garam, *Katalog der awarenzeitlichen Goldgegenstände und der Fundstücke aus den Fürstengräbern im Ungarischen Nationalmuseum*, Budapest 1993.

Garam 2001 – É. Garam, *Funde byzantinischer Herkunft in der Awarenzeit vom Ende des 6. bis zum Ende des 7. Jahrhunderts*, Budapest 2001.

Garam 1995 – É. Garam, *Das awarenzeitliche Gräberfeld von Tiszafüred*, Budapest 1995.

Гачић 1985 – Ђ. Гачић, Некрополе сеобе народа у Старчеву, *Гласник Српског археолошког друштва* 2, 1985, 178–179.

Górecki 2005 – J. Górecki, Ze studiów nad razwojem, pochodzeniem oraz funkcją trzyczęściowych pojeników okresu wczesnego średniowiecza, *Studia Lednickie* VIII, 2005, 85–129.

Grefen-Peters 1992 – S. Grefen-Peters, Doppelbestattungen in awarischen Gräberfeldern – Wege und Grenzen der anthropologischen Forschung, *Awarenforschungen II*, Wien 1992, 1193–1228.

Daim 1987 – F. Daim, *Das awarische Gräberfeld von Leobersdorf, NÖ*, Wien 1987.

Daim 2003 – F. Daim, Avars and Avar Archaeology, an introduction, *Regna and Gentes. The Relationship between Late Antique and Early Mediaeval Peoples and Kingdoms in the Transformation of the Roman World*, Leiden – Boston 2003, 463–570.

Дрёмов, Круглов 2021 – И. И. Дрёмов, Е. В Круглов, Железные конусы в погребениях Улуса Джучи: аспекты этнокультурной принадлежности, *Нижневолжский археологический вестник* 20/2, 2021, 149–168.

Ďuricová 2007 – M. Ďuricová, Zvláštnosti v ukladaní mŕtvych ako súčasť duchovnej kultúry obyvateľstva v období avarského kaganátu na území Slovenska, *Slovenská archeológia* LV, 2007, 311–351.

Ďuricová 2014 – M. Ďuricová, K problematike výskytu symbolických hrobov na pohrebiskách obdobia avarského kaganátu z územia Slovenska, *Musaica* XXVIII, 2014, 97–104.

Zábojník 1991 – J. Zábojník, Seriation von Gürtelbeschlaggarnituren aus dem gebeit der Slowakei und Österreichs (Beitrag zur Chronologie der Zeit des Awarischen Kaganats), *K problematike osídlenia Stredodunajskej oblasti vo včasnom stredoveku*, Nitra 1991, 219–323.

Zábojník 2000 – J. Zábojník, Zur Problematik der «byzantinischen» Gürtelbeschläge aus Čataj, Slowakei, *Die Awaren am Rand der byzantinischen Welt. Studien zu Diplomatie, Handel und Technologietransfer im Frühmittelalter*, Innsbruck 2000, 327–365.

Zábojník 2004 – J. Zábojník, Birituálne pohrebiská v severnej a západnej časti Karpatskej kotliny v období avarského kaganátu, *Študijné zvesti* 36, 2004, 339–357.

Zábojník 2009 – J. Zábojník, *Slovensko a avarský kaganát*, Bratislava 2009[2].

Јанковић 2003 – Ђ. Јанковић, Чаревци, Нови Сланкамен, гробље IX столећа – разматрање датовања, *Споменица Јована Ковачевића*, Београд 2003, 97–110.

Ježek, Zavřel 2013 – M. Ježek, J. Zavřel, Touchstones in graves from the Avar and Great Moravian periods, *Archäologisches Korrespondenzblatt* 43/1, 2013, 117–129.

Kiss 1962 – A. Kiss, Az Avar kori lovas – temetkezés szokásának vizsgálata, *Janus Pannonius Múzeum Évkönyve*, 1962, 153–162.

Koncz 2015 – I. Koncz, 568 – A Historical Date and Its Archaeological Consequences, *Acta Archaeologica Academiae Scientiarum Hungaricae* 66, 2015, 315–340.

Ковачевић 1977 – Ј. Ковачевић, *Аварски каганат*, Београд 1977.

Kovrig 1963 – I. Kovrig, *Das awarenzeitliche Gräberfeld von Alattyán*, Budapest 1963.

Kroll 2013 – H. Kroll, Ihrer Hühner waren drei und ein stolzer Hahn dabei. Überlegungen zur Beigabe von Hühnern im awarischen Gräberfeld an der Wiener Csokorgasse, *Offa* 69–70/2012–13, 2013, 201–216.

Kürti, Wicker 1991 – B. Kürti, E. Wicker, Bemerkungen zur Agraffenfrage der Awarenzeit, *Zalai Múzeum* 3, 1991, 19–34.

Madaras 1995 – L. Madaras, *The Szeged-Fehértó „A“ and „B“ Cemeteries*, Debrecen – Budapest 1995.

Марковић 2013 – Н. Д. Марковић, Скелет коња из коњаничког гроба са некрополе Ушће код Обреновца, *Зборник Народног музеја (археологија)* XXI–1/2013, 275–290.

Marković *et al.* 2015 – N. Marković , M. Janeczek, D. Marinković, O. Stevanović, N. Krstić, K. Petrujkić, R. Trailović, Paleopathological and radiologicalexamination of the Avar period horse bonesfrom central Balkans (Serbia), *Medycyna Weterynaryjna* 71/10, 2015, 619–625.

Микић Антонић 2012 – Б. Микић Антонић, *Некропола из периода аварске доминације. Локалитет Пионирска улица у Бечеју*, Бечеј 2012.

Müller, Ambros 1994 – H.-H. Müller, C. Ambros, Neue frühgeschichtliche Pferdeskelettunde aus dem Gebiet der Slowakei, *Študijné zvesti* 30, 1994, 117–175.

Нађ 1959 – Ш. Нађ, Некропола код Арадца из раног средњег века, *Рад војвођанских музеја* 8, 1959, 45–102.

Novotnik 2011 – Á. Novotnik, Ein besonderer Bestattungsbrauch: „Leere“ Gräber in der Awarenzeit, *Acta Antiqua Academiae Scientiarum Hungaricae* 51, 2011, 99–113.

Pásztor 2008 – A. Pásztor, Ergebnisse der typochronologischen Untersuchung awarenzeitlicher Perlenfunden in Ungarn – Perlentracht in der Früh- und Mittelawarenzeit, *Antaeus* 29–30, 2008, 307–324.

Pogány 1908 – J. Pogány, Gombosi sírmező (Bács-Bodrog), *Archaeologiai Értesítö* XXVIII, 1908, 404–415.

Pomberger *et al.* 2021 – B. M. Pomberger, J. Mühlhans, K. Saunderson, K. Grömer, Pellet Bells from the Avar age Cemeteries of Komárno, *Slovenská archeológia* LXIX–1, 2021, 99–131.

Premužić *et al.* 2016 – Z. Premužić, P. Rajić Šikanjić, A. Rapan Papeša, A case of Avar period trepanation from Croatia, *Anthropological Review* 79/4, 2016, 471–482.

Profantová 2020 – N. Profantová, Nové publikace: Jozef Zábojník: Pohrebisko z obdobia avarského kaganátu v Obide. VEDA – Archeologický ústav SAV, Bratislava – Nitra 2019. ISBN 978-80-8196-013-0. 335 str. + DVD, *Archeologické rozhledy* LXXII/2020, 306–307.

Радојевић 2004 – Д. Радојевић, Раносредњовековна некропола на циглани у Чонопљи, *Рад Музеја Војводине* 43–45/2001–2003, 2004, 41–55.

Ранисављев 2007 – А. Ранисављев, *Раносредњовековна некропола код Мокрина*, Београд 2007.

Rapan Papeša 2020 – A. Rapan Papeša, Magic or practicality? "Antiquities" in Avar period graves in eastern Croatia, *Life and Death in Medieval and Early Modern Times. Proceedings of the 5th International Scientific Conference of Mediaeval Archaeology of the Institute of Archaeology Zagreb, 6th and 7th June 2018*, Zagreb 2020, 17–31.

Риц 1997 – П. Риц, Стање истраживања периода сеобе народа у северној Бачкој, *Рад Музеја Војводине* 39, 1997, 199–207.

Ricz 1985 – P. Ricz, Timber Constructions in Avar Graves – Contributions to the Resolving of Problems Linked with Burial of the Avars in North Bačka, *Archaeologia Iugoslavica* XXII–XXIII/1982–1983, 1985, 96–112.

Szücsi 2014 – F. Szücsi, Avar kori balták, bárdok, szekercék és fokosok. Baltafélék a 6–8. századi Kárpát-medencében, *Alba Regia* 42/2013–2014, 2014, 113–186.

Sós, Salamon 1995 – Á. Cs. Sós, Á. Salamon, *Cemeteries of the Early Middle Ages (6th–9th centuries A.D.) at Pókaszepetk*, Budapest 1995.

Stadler 2005 – P. Stadler, *Quantitative Studien zur Archäologie der Awaren I*, Wien 2005.

Staššíková-Štukovská 2004 – D. Staššíková-Štukovská, Sklené koráliky z pohrebiska v Prši II, *Slovenská archeológia* LII, 2004, 35–54.

Scharrer-Liška *et al.* 2015 – G. Scharrer-Liška, O. Cichocki, K. Wiltschke-Schrotta, Wooden coffins in the Avar-period cemetery in Frohsdorf, Lower Austria, *Open Archaeology* 2015/1, 54–78.

Schülke 1999 – A. Schülke, On Christianization and Grave-Finds, *European Journal of Archaeology* 2/1999, 77–106.

Tobias 2007 – B. Tobias, Néhány érdekes tárgy a Zillingtal-Unterer Kapellenberg D. 41. sírból. Csatfibulák és ecsetek, *Archaeológiai Értesitő* 132, 2007, 325–341.

Tobias 2011 – B. Tobias, Avar kori tarsolyzárók a Kárpát-medencében, *A Móra Ferenc Múzeum Évkönyve Studia Archaeologica* XII, 277–312.

Tomka 1986 – P. Tomka, Archäologische Studien zur Ethnographie der awarenzeitlichen Völker, *Mitteilungen der Anthropologischen Gesellschaft in Wien* 116, 1986, 155–168.

Tomka 1992 – P. Tomka, Awarische Grabsitten – Abriß der Forschungsgeschichte bis 1963, *Awarenforschungen I1*, Wien 1992, 969–1023.

Tomka 2003 – P. Tomka, Az avarkori temetkezési szokások kutatásának újabb eredményei. Kettős- és többes temetkezések, *Arrabona* 41, 2003, 11–56.

Točík 1992 – A. Točík, Materiály k dejinám južného Slovenska v 7.–14. storočí, *Študijné zvesti* 28, 1992, 5–250.

Трбуховић 1980 – Л. Трбуховић, Прилог проучавања страних етничких елемената у аварским некрополама, *Старинар* XXX, 1980, 123–129.

Härke 1993 – H. Härke, Intentionale und funktionale Daten. Ein Beitrag zur Theorie und Methodik der Gräberarchäologie. *Archäologisches Korrespondenzblatt* 23/1, 1993, 141–146.

Husár 2008 – M. Husár, Niektoré aspekty včasnostredovekých kopijí a oštepov z územia Slovenska – otázky násad a odtlačkov textílií, *Archaeologia historica* 33/08, 457–470.

Cosma 2020 – C. Cosma, Male Graves Containing Earrings and Beads from the Avar Cemeteries in Transylvania, *Life and death in mediaeval and early modern times. Proceedings of the 5th International Scientific Conference of Mediaeval Archaeology of the Institute of Archaeology Zagreb, 6th and 7th June 2018*, Zagreb 2020, 47–63.

Costello, Williams 2019 – B. Costello, H. Williams, Rethinking heirlooms in early medieval graves, *Objects of the Past in the Past. Investigating the significance of earlier artefacts in later contexts*, Oxford 2019, 115–130.

Csiky 2012 – G. Csiky, Seaxe im awarenzeitlichen Karpatenbecken, *Thesaurus avarorum. Régészeti tanulmányok Garam Éva tiszteletére – Archaeological Studies in Honour of Eva Garam*, Budapest 2012, 371–393.

Csiky 2015 – G. Csiky, *Avar-Age Polearms and Edged Weapons. Classification, Typology, Chronology and Technology*, Leiden – Boston 2015.

Čilinská 1961 – Z. Čilinská, Nové nálezy falér zo slovansko–avarských pohrebísk na Slovansku, *Slovenská archeológia* IX/1–2, 1961, 325–346.

Čilinská 1966 – Z. Čilinská, *Slawisch-awarisches Gräberfeld in Nové Zámky*, Bratislava 1966.

Čilinská 1990 – Z. Čilinská, Die awarenzeitlichen Frauengräber mit Pferdbestattung in der Slowakei, *A Wosinszky Mór Múzeum Évkönyve* XV, 1990, 135–146.

Štefančič 1988 – *Ranosrednjovekovni skeleti nekropole Sv. Erazmo kod Ohrida*, Beograd 1988.

Wiltschke-Schrotta, Stadler 2005 – K. Wiltschke-Schrotta, P. Stadler, Beheading in Avar Times (630–800 A.D.), *Acta medica Lituanica* 12, 2005, 58–64.



АНА ПРЕМК
(1937–2022)

Ана Премк је рођена јануара 1937. године у Београду, од мајке Ружице и оца Едуарда. У родном граду је завршила основну и средњу школу, а 1960. године Филозофски факултет, где је дипломирала античку археологију. У Београду је и преминула, 4. маја 2022. године.

Непосредно након дипломирања, 1961. године, запослила се у Археолошком друштву Југославије, где је радила до запослења у Археолошком институту, 1970. године. Током рада у Археолошком друштву Југославије, 1965. године, положила је стручни испит за звање кустоса.

Ана Премк је у Археолошком институту радила као стручни сарадник документатор, посебно ангажована на археолошким радовима у Сирмијуму и Нишу и документацији са тих ископавања. Звање виши стручни сарадник стекла је 1979. године, а стручни саветник 1985. Крајем 1993. године стекла је и звање истраживач сарадник. Годинама је, све до пензије, била секретар редакције и технички уредник часописа *Старинар* и *Sirmium*.

Године 1974. магистрирала је на Филозофском факултету у Београду на тему „Керамика из затворених целина IV века у Сирмијуму", утемељену на дугогодишњем раду у Сирмијуму, где је била један од најактивнијих стваралаца првог типолошког система римске и средњовековне керамике у нашој земљи, формираног управо на основу налаза са тог локалитета.

За свој предани рад, Ана Премк је 1976. године добила повељу са медаљом Археолошког друштва Југославије за изузетно залагање. Ово признање додељено јој је поводом двадесет пет година постојања тог друштва.

Била је члан Српског археолошког друштва и *Rei cretariae romanae fautores* у Швајцарској. Објавила је пет научних и стручних радова.

Ана Премк је током каријере учествовала на бројним теренским истраживањима: Калемегданска тврђава, Рисовача, Белегиш, Губеревац на Космају, више археолошких налазишта у оквиру пројекта Ђердап I (Сип, Доњи Милановац, Чезава, Салдум), затим Велики Градац, Равна, заштитна истраживања у Нишу и његовој околини, Сирмијум, манастир Бањска, теренска обрада надгробних споменика у источној Србији, обрада керамике у Гамзиграду – Ромулијани итд.

Одлазак Ане Премк на неки начин је означио крај једног времена кога се увек са радошћу сећам и у које бих волела да се, бар накратко, вратим. Туга због Аниног одласка све чешће почиње да се меша са радошћу присећања на период мога живота у коме је она заузимала веома важно место. За мене, Ана Премк била је пријатељ, савезник, чувар, критичар, бранитељ, утешитељ, учитељ, слушалац, пратилац, често и градитељ. У том евоцирању успомена на једно срећније и хуманије доба, Ана је присутна жива и врцавог духа, баш онаква какву је сви који су је познавали памте.

Маја ЖИВИЋ

EDITORIAL POLICY OF THE JOURNAL *STARINAR*

The journal *Starinar* is dedicated to topics in the areas of archaeology, history, history of arts, architecture and similar scholarly disciplines.

The journal *Starinar* started to be published in 1884 as a periodical publication issued by the Serbian Archaeological Society, and in 1950 it became the periodical of the Institute of Archaeology in Belgrade.

The journal *Starinar* publishes original papers that have not been published previously: original scientific articles, excavation reports, scientific reviews, book reviews, critiqical reviews, bibliographies, necrologies. Some issues of *Starinar* can be dedicated to emeritus researchers in the field of archaeology.

Starinar is an Open Access journal.

Articles can be submitted in English, German or French. If the paper is written in English, summary can be in Serbian (for authors from Serbia) or English (for international authors), while articles submitted in German or French need to have a summary in English.

Papers for *Starinar* have to be submitted to the editorial secretary and must be formatted in accordance with the Guidelines/ Submission instructions for authors.

The Journal is issued once a year.

Online First option is applied in *Starinar*: an electronic version of an accepted manuscript is made available online after the Editorial Board accepts the manuscript for publishing and after the editing and proofreading procedure.

Journal *Starinar* publishes articles from the fields of archaeology, history, architecture, history of arts, classical philology, physical anthropology, etc.

EDITORIAL RESPONSIBILITIES

The Editorial Board is responsible for deciding which articles submitted to ***Starinar*** will be published. The Editorial Board is guided by the Editorial Policy and constrained by legal requirements in force regarding libel, copyright infringement and plagiarism.

The Editorial Board reserves the right to decide not to publish submitted manuscripts in case it is found that they do not meet relevant standards concerning the content and formal aspects. The Editorial Staff will inform the authors whether the manuscript is accepted for publication within 120 days from the date of the manuscript submission.

Editorial Board must hold no conflict of interest with regard to the articles they consider for publication. If an Editor feels that there is likely to be a perception of a conflict of interest in relation to their handling of a submission, the selection of reviewers and all decisions on the paper shall be made by the editor and editorial board.

Editorial Board shall evaluate manuscripts for their intellectual content free from any racial, gender, sexual, religious, ethnic, or political bias.

The Editor and the Editorial Staff must not use unpublished materials disclosed in submitted manuscripts without the express written consent of the authors. The information and ideas presented in submitted manuscripts shall be kept confidential and must not be used for personal gain.

The journal Starinar applies the system of double-blind peer review. Editors and the Editorial Staff shall take all reasonable measures to ensure that the reviewers remain anonymous to the authors before, during and after the evaluation process and the authors remain anonymous to reviewers until the end of the review procedure.

Papers prepared for publishing should be submitted to the editorial secretary between 20 November to 20 December of the current year for the volume that will be published the following year. The Editorial board meets after the submission of all papers. At the first meeting, reviewers are selected and assigned manuscripts for review.

AUTHORS' RESPONSIBILITIES

Authors warrant that their manuscript is their original work, that it has not been published before and is not under consideration for publication elsewhere. Parallel submission of the same paper to another journal constitutes a misconduct and eliminates the manuscript from consideration by *Starinar*.

The Authors also warrant that the manuscript is not and will not be published elsewhere (after the publication in Starinar) in any other language without the consent of the Publisher.

In case a submitted manuscript is a result of a research project, or its previous version has been presented at a conference in the form of an oral presentation (under the same or similar title), detailed information about the project, the conference, etc. shall be provided in front of the first footnote and it should be marked with a star. A paper that has already been published in another journal cannot be reprinted in Starinar.

It is the responsibility of each author to ensure that papers submitted to *Starinar* are written with ethical standards in mind. Authors affirm that the article contains no unfounded or unlawful statements and does not violate the rights of third parties. The Publisher will not be held legally responsible should there be any claims for compensation.

Reporting standards

A submitted manuscript should contain sufficient detail and references to permit reviewers and, subsequently, readers to verify the claims presented in it. The deliberate presentation of false claims is a violation of ethical standards. Book reviews, critical reviews, necrologies and other professional articles are reviewed as well and the decision on their acceptance or rejection is made by the Editorial Board based on reviews.

Authors are exclusively responsible for the contents of their submissions and must make sure that they have permission from all involved parties to make the data public.

Authors wishing to include figures, tables or other materials that have already been published elsewhere are required to obtain permission from the copyright holder(s). Any material received without such evidence will be assumed to originate from the authors.

Authorship

Authors must make sure that all only contributors who have significantly contributed to the submission are listed as authors and, conversely, that all contributors who have significantly contributed to the submission are listed as authors. If persons other than authors were involved in important aspects of the research project and the preparation of the manuscript, their contribution should be acknowledged in a footnote or the Acknowledgments section.

Acknowledgment of Sources

Authors are required to properly cite sources that have significantly influenced their research and their manuscript. Information received in a private conversation or correspondence with third parties, in reviewing project applications, manuscripts and similar materials, must not be used without the express written consent of the information source.

Plagiarism

Plagiarism, where someone assumes another's ideas, words, or other creative expression as one's own, is a clear violation of scientific ethics. Plagiarism may also involve a violation of copyright law, punishable by legal action.

Plagiarism includes the following:

– Word for word, or almost word for word copying, or purposely paraphrasing portions of another author's work without clearly indicating the source or marking the copied fragment (for example, using quotation marks);
– Copying equations, figures or tables from someone else's paper without properly citing the source and/or without permission from the original author or the copyright holder.

Please note that all submissions are thoroughly checked for plagiarism. Any paper which shows obvious signs of plagiarism will be automatically rejected and authors will be temporary permitted to publish in Starinar.

In case plagiarism is discovered in a paper that has already been published by the journal, it will be retracted in accordance with the procedure described below under Retraction policy, and authors will be temporary permitted to publish in Starinar.

Conflict of interest

Authors should disclose in their manuscript any financial or other substantive conflict of interest that might have influenced the presented results or their interpretation.

Fundamental errors in published works

When an author discovers a significant error or inaccuracy in his/her own published work, it is the author's obligation to promptly notify the journal Editor or publisher and cooperate with the Editor to retract or correct the paper.

By submitting a manuscript the authors agree to abide by the *Starinar*'s Editorial Policies.

REVIEWERS' RESPONSIBILITIES

Reviewers are required to provide written, competent and unbiased feedback in a timely manner on the scholarly merits and the scientific value of the manuscript.

The reviewers assess manuscript for the compliance with the profile of the journal, the relevance of the investigated topic and applied methods, the originality and scientific relevance of information presented in the manuscript, the presentation style and scholarly apparatus.

Reviewers should alert the Editor to any well-founded suspicions or the knowledge of possible violations of ethical standards by the authors. Reviewers should recognize relevant published works that have not been cited by the authors and alert the Editor to substantial similarities between a reviewed manuscript and any manuscript published or under consideration for publication elsewhere, in the event they are aware of such. Reviewers should also alert the Editor to a parallel submission of the same paper to another journal, in the event they are aware of such.

Reviewers must not have conflict of interest with respect to the research, the authors and/or the funding sources for the

research. If such conflicts exist, the reviewers must report them to the Editor without delay.

Any selected referee who feels unqualified to review the research reported in a manuscript or knows that its prompt review will be impossible should notify the Editor without delay.

Reviews must be conducted objectively. Personal criticism of the author is inappropriate. Reviewers should express their views clearly with supporting arguments.

Any manuscripts received for review must be treated as confidential documents. Reviewers must not use unpublished materials disclosed in submitted manuscripts without the express written consent of the authors. The information and ideas presented in submitted manuscripts shall be kept confidential and must not be used for personal gain.

PEER REVIEW

The submitted manuscripts are subject to a peer review process. The purpose of peer review is to assists the Editorial Board in making editorial decisions and through the editorial communications with the author it may also assist the author in improving the paper.

To every paper submitted to editorial board of Starinar two reviewers are assigned. Reviewers could be members of the Editorial Board, associates of the Institute of Archaeology or eternal associates, with the same or higher scientific degree as the author(s), competent in the field of the manuscript's topic. The suggestions on who the reviewers should be are made by the Editorial Board, and adopted by the Editor-in-Chief.

All papers are reviewed by using the double-blind peer review system: the identity of the author is not known to the reviewers and vice versa. Reviewers shall send their reviews within the period of 30 days after the receipt of the manuscript. Reviewers are not paid for this work.

If a reviewer requires a revision of a manuscript, authors shall send a revised version with changes made in accordance with the reviewer's suggestions within the period of 30 days. In case they consider the revision request unfounded, the authors should send their arguments explaining why they did not make the required revision. The same timeframe applies to revisions of manuscripts that are not written in accordance with the author guidelines.

The decision of acceptance of the paper is made by the Editorial Board of Starinar by majority vote based on the peer reviews and the evaluation of the authors' revision or their arguments, if they did not make changes to the manuscript.

After the final decision on the content of a volume is made, manuscripts are sent for editing and proofreading, and then to a graphic designer, who is responsible for computer layout, design and prepress. Before printing, the authors will have the opportunity to proofread their paper twice in the PDF format. The final approval for printing is given by the Editor-in-Chief. The whole volume should be send to the printing press by 1 October.

The reviewers selected by the Editorial Board, receive a peer review form with questions that they should answer. The purpose of the questions is to indicate all aspects that they should consider in order to make a decision on the destiny of a paper. In the final part of the form, reviewers are supposed to write their opinion and suggestions how to improve the paper. The identity of reviewers is unknown to authors, before, during and after the review procedure. The identity of authors is unknown to reviewers before, during and after the review procedure (until the paper is published). It is suggested to authors to avoid formulations that could reveal their identity. The Editorial Board shall ensure that before sending a paper to a reviewer, all personal details of the author (name, affiliation, etc.) will be deleted and that all measures will be undertaken in order to keep the author's identity unknown to the reviewer during the review procedure.

The choice of reviewers is at the Editorial Board's discretion. The reviewers must be knowledgeable about the subject area of the manuscript; and they should not have recent joint publications with any of the authors.

All of the reviewers of a paper act independently and they are not aware of each other's identities. If the decisions of the two reviewers are not the same (accept/reject), the Editor may assign additional reviewers.

During the review process Editor may require authors to provide additional information (including raw data) if they are necessary for the evaluation of the scholarly merit of the manuscript. These materials shall be kept confidential and must not be used for personal gain.

The Editorial team shall ensure reasonable quality control for the reviews. With respect to reviewers whose reviews are convincingly questioned by authors, special attention will be paid to ensure that the reviews are objective and high in academic standard. When there is any doubt with regard to the objectivity of the reviews or quality of the review, additional reviewers will be assigned.

PROCEDURES FOR DEALING WITH UNETHICAL BEHAVIOUR

Anyone may inform the editors and/or Editorial Staff at any time of suspected unethical behaviour or any type of misconduct by giving the necessary information/evidence to start an investigation.

Investigation

- Editor-in-Chief will consult with the Editorial Board on decisions regarding the initiation of an investigation.
- During an investigation, any evidence should be treated as strictly confidential and only made available to those strictly involved in investigating.
- The accused will always be given the chance to respond to any charges made against them.
- If it is judged at the end of the investigation that misconduct has occurred, then it will be classified as either minor or serious.

Minor misconduct

Minor misconduct will be dealt directly with those involved without involving any other parties, e.g.:

- Communicating to authors/reviewers whenever a minor issue involving misunderstanding or misapplication of academic standards has occurred.
- A warning letter to an author or reviewer regarding fairly minor misconduct.

Major misconduct

The Editor-in-Chief, in consultation with the Editorial Board, and, when appropriate, further consultation with a small group of experts should make any decision regarding the course of

action to be taken using the evidence available. The possible outcomes are as follows (these can be used separately or jointly):

– Publication of a formal announcement or editorial describing the misconduct.
– Informing the author's (or reviewer's) head of department or employer of any misconduct by means of a formal letter.
– The formal, announced retraction of publications from the journal in accordance with the Retraction Policy (see below).
– A ban on submissions from an individual for a defined period.
– Referring a case to a professional organization or legal authority for further investigation and action.

When dealing with unethical behaviour, the Editorial Staff will rely on the guidelines and recommendations provided by the Committee on Publication Ethics (COPE): http://publicationethics.org/resources/.

RETRACTION POLICY

Legal limitations of the publisher, copyright holder or author(s), infringements of professional ethical codes, such as multiple submissions, bogus claims of authorship, plagiarism, fraudulent use of data or any major misconduct require retraction of an article. Occasionally a retraction can be used to correct errors in submission or publication. The main reason for withdrawal or retraction is to correct the mistake while preserving the integrity of science; it is not to punish the author.

Standards for dealing with retractions have been developed by a number of library and scholarly bodies, and this practice has been adopted for article retraction by Starinar: in the electronic version of the retraction note, a link is made to the original article. In the electronic version of the original article, a link is made to the retraction note where it is clearly stated that the article has been retracted. The original article is retained unchanged, save for a watermark on the PDF indicating on each page that it is "retracted."

OPEN ACCESS POLICY

Starinar is an Open Access Journal. All articles can be downloaded free of charge and used in accordance with the licence Creative Commons – Attribution-NonCommercial-No Derivs 3.0 Serbia (https://creativecommons.org/licenses/by-nc-nd/3.0/rs/). The submission, review and publishing procedures are free of charge.

Self-archiving Policy

The journal *Starinar* allows authors to deposit the accepted, reviewed version of the manuscript, as well as final, published PDF version of the paper in an institutional repository and non-commercial subject-based repositories, or to publish it on Author's personal website (including social networking sites, such as ResearchGate, Academia.edu, etc.) and/or departmental website, and in accordance with the licence Attribution-NonCommercial-NoDerivs 3.0 Serbia (http://creativecommons.org/licenses/by-nc-nd/3.0/rs/), at any time after publication. Full bibliographic information (authors, article title, journal title, volume, issue, pages) about the original publication must be provided and a link must be made to the article's DOI.

Copyright

Once the manuscript is accepted for publication, authors shall transfer the copyright to the Publisher.

Authors grant to the Publisher the following rights to the manuscript, including any supplemental material, and any parts, extracts or elements thereof:

– the right to reproduce and distribute the Manuscript in printed form, including print-on-demand;
– the right to produce prepublications, reprints, and special editions of the Manuscript;
– the right to translate the Manuscript into other languages;
– the right to reproduce the Manuscript using photomechanical or similar means including, but not limited to photocopy, and the right to distribute these reproductions;
– the right to reproduce and distribute the Manuscript electronically or optically on any and all data carriers or storage media – especially in machine readable/digitalized form on data carriers such as hard drive, CD-Rom, DVD, Blu-ray Disc (BD), Mini-Disk, data tape – and the right to reproduce and distribute the Article via these data carriers;
– the right to store the Manuscript in databases, including online databases, and the right of transmission of the Manuscript in all technical systems and modes;
– the right to make the Manuscript available to the public or to closed user groups on individual demand, for use on monitors or other readers (including e-books), and in printable form for the user, either via the internet, other online services, or via internal or external networks.

DISLAIMER

The views expressed in the published works do not express the views of the Editors and Editorial Staff. The authors take legal and moral responsibility for the ideas expressed in the articles. Publisher shall have no liability in the event of issuance of any claims for damages. The Publisher will not be held legally responsible should there be any claims for compensation.

SUBMISSION INSTRUCTIONS FOR THE *STARINAR* JOURNAL

By applying the new rules (Acta) for publishing activities issued by the Institute of Archaeology, Belgrade and in accordance with the editorial policy of the Starinar journal, the editorial board of the Starinar journal have decided to improve its quality and, thus, contribute to its full integration into the international system of exchanging scientific information.

The Starinar journal is dedicated to topics from the scientific areas of archaeology, history, history of arts, architecture and similar scientific disciplines.

The Starinar journal publishes original papers that have not been previously published: original scientific articles, excavation reports, scientific reviews, book reviews, critiques, bibliographies and necrologies.

Articles can be submitted in English, German or French. If the paper is written in English, the summary can be written in Serbian (for authors from Serbia) or English (for foreign authors), while articles submitted in German or French need to have the summary in English.

Articles submitted to the Starinar editorial board must contain customary data. Each article should therefore include: title; author's forename and surname; affiliation; abstract; key words; main text; summary; graphic images with list of captions; bibliography; contact details.

---

1. The title should be short and clear, reflecting as much as possible the content of the article. The title should include words which are easy to index and search for. If there are no such words integrated into the title, it is preferable to have an added subtitle. The title should appear in either the fifth or sixth row under the upper margin, in bold, with a font size of 14 pts.

2. The author or authors should include their full names.

3. The author or authors should write the official name and address of the institution they represent, together with, where applicable, the official name and address of the location where they performed their research. With complex institutions, all names should be included (e.g. University of Belgrade, Philosophical Faculty, Department of Archaeology, Belgrade).

4. The abstract represents a short overview of the article (100–250 words). It is advisable for this to contain words which are easy to index or search for. The abstract should offer data about the research goal, method, results and conclusion. Abstracts should be written in the same language as the article (English, German or French). It is necessary to use correct grammar and spelling and to have the document reviewed by a qualified native proof-reader.

5. The key words should include words or phrases that effectively describe the content of the article, and which are easy to index and search for. They should be selected according to an internationally recognised source (index, vocabulary, and thesaurus), such as the list of key words Web of Science. The number of key words should not exceed ten.

6. Articles should be no longer than 32 DIN A4 pages, including footnotes and illustrations. The body text should be written digitally, using Times New Roman or Arial font (font size 12 pts), MS Office Word 97 or later, with a line spacing of 1.5 and margins set to 2.54 cm. The body text must not contain illustrations. Illustrations must be submitted as separate files.

7. Manuscripts must be submitted in English, German or French, with the author obliged to state the name of the translator and the proof-reader who checked the paper. Words, statements

and titles written in a foreign language should be written using their original spelling and, in accordance with the editor's or reviewer's suggestions, transliterated (translated) into the submission language of the manuscript.

Footnotes can be included in the main paper. They should contain less important data, required explanations and cited literature. (A separate chapter of the Submission Instructions details the required method for quoting that is to be applied when writing a paper).

8. The summary must have the same content as the abstract, only expanded, but not longer than 1/10 of the paper's overall size. It is strongly advised to write the summary in a structural form. Papers submitted in English must have the summary in Serbian (for Serbian authors) or English (for foreign authors). Papers in German or French must have the summary in English. As well as the summary text, the title of the paper, the key words and the author's affiliation should be written in the appropriate language.

9. Illustrations (photographs, tables, drawings, graphs etc.) should all be in the same format. Scanned illustrations should be in a resolution of 600 dpi, while photographs should be in a resolution of at least 300 dpi, and of a TIFF, PSD or JPG format. Illustrations are to be submitted as a separate part of the paper and should not be integrated into the basic text. Titles and captions should be submitted bilingually, where applicable, (the languages in which the paper and summary are written), and as a Word document.

10. The bibliography should include bibliographic sources (articles, monographs etc.). Within the paper it should be quoted with references in the footnotes and as a list of literature/bibliography at the end of the manuscript. The bibliography represents a part of every scientific paper, with precisely quoted bibliographical references. The list of used sources should follow a unique pattern, in a sequence based on the quoting standards determined by these instructions. The bibliography must be presented in the language and alphabet in which each source has been published. In cases when the publication is published bilingually, all data should also be written bilingually. In cases where the summary is written in another language, then the title of the summary should be written in the same language.

In the list of references: **Popović 2009** – I. Popović, Gilt Fibula with Christogram from the Imperial Palace in Sirmium (Резиме: Позлаћена фибула са христограмом из царске палате у Сирмијуму) *Starinar* LVII (2007), 2009, 101–112.

Publications published in Cyrillic, Greek or any other non Latin alphabet should be transliterated into the Latin alphabet in accordance with the standards of The American Library Association and The Library of Congress of the United States (http://www.loc.gov/catdir/cpso/roman.html), for example:

Quotation within a footnote: (Поповић 1994, 65)

In the list of references: **Поповић 1994** – И. Поповић, (прир.), *Античко сребро у Србији*, Београд 1994. (I. Popović, (prir.), *Antičko srebro u Srbiji*, Beograd, 1994.)

11. Parts of references (authors' names, title, source etc.) are to be quoted in accordance with the accepted quoting form. The most commonly quoted references are listed below:

(MONOGRAPHS)

1**. How to quote an author's books:**

a. A single author

In a footnote: (Popović 2006, 21)

In the list of references: **Popović 2006** – I. Popović, *Roma aeterna inter Savum et Danubium*, Belgrade 2006.

b. Two authors

In a footnote: (Vasić, Milošević 2000, 125)

In the list of references: **Vasić, Milošević 2000** – M. Vasić, G. Milošević. 2000. *Mansio Idimvm rimska poštanska i putna stanica kod Medveđe*, Beograd, 2000.

c. Three or more authors

In a footnote: (Petković et al. 2005, 129–131)

In the list of references: **Petković et al. 2005** – S. Petković, M. Ružić, S. Jovanović, M. Vuksan, & Z. K. Zoffmann. 2005. *Roman and Medieval Necropolis in Ravna near Knjaževac*. Belgrade, 2005.

2**. Quotation of papers in serial publication, collection of papers:**

In a footnote: (Popović 2014, 261)

In the list of references: **Popović 2014** – I. Popović, The Motif of Christogram on the Architectural Elements of the Imperial Palace in Sirmium, in: *The Edict of Serdica (AD 311). Concepts and Realizations of the Idea of Religious Toleration*, (ed.) V. Vachkova, D. Dimitrov, Sofia 2014, 261–276.

3. **How to quote prepared editions (editor, translator or preparator instead of author):**

In a footnote: (Поповић 1994, 65)

In the list of references: **Поповић 1994** – И. Поповић, (прир.), *Античко сребро у Србији*, Београд 1994. (I. Popović, (prir.), *Antičko srebro u Srbiji*, Beograd, 1994.)

4. **How to quote books without indicated author:**

In a footnote: (*Гамзиград. Касноантички царски дворац* 1983, 43)

In the list of references: ***Гамзиград. Касноантички царски дворац* 1983** – *Гамзиград. Касноантички царски дворац*, Београд 1983. (*Gamzigrad. Kasnoantički dvorac*, Beograd, 1983.)

5. Quoting several books of the same author:

a. written in different alphabets

In a footnote: (Поповић 2002, 23–26; Popović 2006, 33)

In the list of references:

Поповић 2002 – И. Поповић, *Накит са Јухора, остава или сакрални тезаурус*, Београд 2002. (I. Popović, *Nakit sa Juhora, ostava ili sakralni tezaurus*, Beograd, 2002.)

Popović 2006 – I. Popović, *Roma Aeterna inter Savum et Danubium.* Belgrade, 2006.

b. written in the same year

In a footnote: (Dawkins 1996a; 1996b)

In the list of references:

Dawkins 1996a – R. Dawkins, *Climbing Mount Improbable*, London, 1996.

Dawkins 1996b – R. Dawkins, *River out of Eden*, London, 1996.

6**. Quoting chapters or parts of books:**

In a footnote: (Кондић 1994, 66)

In the list of references: **Кондић 1994** – Ј. Кондић, Рановизантијско сребро, у: *Античко сребро у Србији*, И. Поповић, (ур.), Београд 1994, 65–67. (J. Kondić, Ranovizantijsko srebro, u: *Antičko srebro u Srbiji*, I. Popović, (ur.), Beograd 1994, 65–67.)

7. **Quoting chapters or parts of previously published books (as an original source):**

In a footnote: (Cicero 1986, 35)

In the list of references: **Cicero 1986** – Cicero Quintus Tullius, Handbook on canvassing for the consulship, in: *Rome: Late republic and principate*, W. E. Kaegi, P. White (eds.), vol. 2, Chicago, 1986, 33–46. Originally published in: E. Shuckburgh (trans.) *The letters of Cicero*, vol. 1, London, 1908.

8. **Quoting books which have been published on-line:**

In a footnote: (Kurland, Lerner 1987)

In the list of references: **Kurland, Lerner 1987** – Ph. B. Kurland, R. Lerner, (eds.) *The founders' Constitution*. Chicago 1987. //press-pubs.uchicago.edu/founders/, accessed (date of visit to the page)

ARTICLES FROM PRINTED PERIODICALS OR PERIODICALS PUBLISHED ON-LINE

9**. Quoting an article from a printed periodical:**

In a footnote: (Vasić 2004, 91, fig. 17)

In the list of references: **Vasić 2004** – M. Vasić, Bronze railing from Mediana. *Starinar* LIII–LIV 2004, 79–109.

10**. Quoting an article from a periodical published on-line:**

In a footnote: (Van Eijck 2009, 41)

In the list of references: **Van Eijck 2009** – D. Van Eijck, Learning from simpler times, *Risk Managemen*t, vol. 56, no 1, 2009, 40–44. http://proquest.umi.com/, accessed (date of visit to the page)

DOCTORAL AND MASTER THESES

11. **Quoting doctoral or master theses:**

In a footnote: (Ilić 2005, 25–32)

In the list of references: **Ilić 2005** – O. Ilić, *Ranohrišćanski pokretni nalazi na području dijeceze Dakije od IV do početka VII veka.* Unpublished MA thesis, University of Belgrade, 2005.

LECTURES FROM SCIENTIFIC GATHERINGS

12. **Quoting a published lecture or communication presented at a scientific gathering:**

In a footnote: (Vasić 2008, 69, fig. 3)

In the list of references: **Vasić 2008** – M. Vasić, Stibadium in Romuliana and Mediana. *Felix Romvliana 50 years of archaeological excavations*, M. Vasić (ed.), (Papers from the International Conference, October, 27–29 2003, Zaječar, Serbia), Belgrade–Zaječar 2006, 69–75.

13. **Quoting an unpublished lecture or communication presented at a scientific gathering:**

In a footnote: (Gavrilović 2004)

In the list of references: **Gavrilović 2004** – N. Gavrilović, *Interpretatio Romana* of Oriental Cults in Upper Moesia from I to IV century A.D. Paper presented at the 10th Annual meeting of the European Association of Archaeologists, September 7–12, 2004 in Lyon, France.

POPULAR MAGAZINES (PERIODICALS) AND NEWSPAPER ARTICLES

14. **Quoting an article from a popular magazine:**

In a footnote: (Јањић 2007, 32–33)

In the list of references: **Јањић 2000** – Ј. Јањић, Прво хришћанско знамење, *НИН*, јул 2007. (J. Janjić, Prvo hrišćansko znamenje, *NIN*, jul 2007.)

15. **Quoting an article from a newspaper:**

In a footnote: (Марковић-Штрбац 1999)

In the list of references: **Марковић-Штрбац 1999** – С. Марковић-Штрбац, Пустахије са Јухора, *Политика*, 18. септембар 1999, Одељак Култура, уметност, наука. (S. Marković-Štrbac, Pustahije sa Juhora, *Politika*, 18. septembar 1999, Odeljak Kultura, umetnost, nauka.)

ELECTRONIC DATABASES, WEB PAGES, COMMENTS etc.

16. **Quoting an electronic database** (Name of the database. Address):

In a footnote: (Pliny the Elder, Perseus Digital Library)

In the list of references: **Pliny the Elder, Perseus Digital Library** – Perseus Digital Library. http://www.perseus.tufts.edu/, accessed (date of access)

17. **Quoting documents and data taken from institutional web pages** (Name of institution. Name of document. Editor. Web site. (Date of access)):

In a footnote: (Evanston Public Library Board of Trustees)

In the list of references: **Evanston Public Library Board of Trustees** – Evanston Public Library Board of Trustees, Evanston Public Library strategic plan, 2000–2010, A decade of outreach, Evanston Public Library, http://www.epl.org/library/strategic-plan-00.html, accessed (example: June 1, 2005).

12. All of the quoted bibliography/literature is to be listed in Latin alphabetic order, by the author's surname initial or the first letter of the publication's title (in cases where the author or editor is not listed).

13. When submitting a manuscript, the author should supply his/her contact details in a separate file: the address of his/her affiliation and his/her e-mail address and telephone number. In cases where there are several authors, the contact details of the first author should only be supplied. The author is also obliged to state the specific name and code of the project within which the paper was created, along with the name of the institution(s) that financed the project. The dates of birth of all authors should be written at the end.

14. Each of the submitted scientific papers will be forwarded to anonymous reviewers by the STARINAR editorial board. For further information concerning the peer review process and the editorial board's, reviewer's and author's obligations and duties, authors can refer to the EDITORIAL POLICY OF THE STARINAR JOURNAL.

15. Papers prepared for printing should be submitted to the secretary of the editorial board in the period between 20th November and 20th December of the year prior to the year of publication of the volume. Apart from a printed version, papers must also be submitted in digital form, on a CD or via e-mail anamen96@gmail.com.

– The printed version should be arranged as follows: 1. title; 2. author's forename and surname; 3. author's affiliation; 4. abstract; 5. key words; 6. basic text; 7. Summary with translated title of the paper, author's affiliation and key words; 8. bibliography; 9. illustrative section; 10. captions (list of illustrations); 11. contact details (address, e-mail and phone number).

– The digital version should contain the following individual files: 1. a file with the six initial parts of the paper (1. title; 2. author's forename, and surname; 3. author's affiliation; 4. abstract; 5. key words; 6. basic text); 2. a file with the summary and other aforementioned data; 3. a file with quoted bibliography; 4. a file with illustrations; 5. a file with captions (bilingually, languages of text and summary); 6. a file with contact details.

Manuscripts will only be accepted if they have been written and edited according to the rules listed above in this guideline and in accordance with the document entitled Editorial Policy of the Starinar Journal. Should the author disagree with the requirements of the editorial board, and the disagreement does not concern the reviewer or proof-reader's remarks, the paper will not be printed. Changes to the content of papers after the completion of the review process are not allowed, unless the changes are to be made according to the reviewer's suggestions.

For additional explanations, please feel free to contact the secretary of the editorial board, Ana Gavrilović, mobile number +381 61 20 14 189 or by e-mail: anamen96@gmail.com.

Starinar Editorial Board

CIP – Каталогизација у публикацији
Народна библиотека Србије, Београд

902/904

СТАРИНАР Српског археолошког друштва /
уредник Снежана Голубовић. – Год. 1, бр. 1 (1884) – год. 12,
књ. 1/4 (1895) ; нови ред, год. 1, бр. 1 (1906) – год. 4, бр. 2
(1909) ; нови ред, год. 5, бр. 1/2 (1910) – год. 6, бр. 1/2 (1911) ;
трећа серија, књ. 1 (1922) – књ. 15 (1940) ; н.с., књ. 1,
год. 1 (1950) – . – Београд : Археолошки институт,
1884–1895; 1906–1909; 1910–1911; 1922–1940; 1950–
(Београд : Бирограф). – 30 cm

Годишње. – Наслов: од бр. 1 (1906) Старинар. – Друго издање
на другом медијуму: Старинар (Online) = ISSN 2406-0739
ISSN 0350-0241 = Старинар
COBISS.SR-ID 8111874

Institut Archéologique Belgrade *Volume LXXII/2022*

STARINAR



ISSN 0350-0241

9 770350 024001